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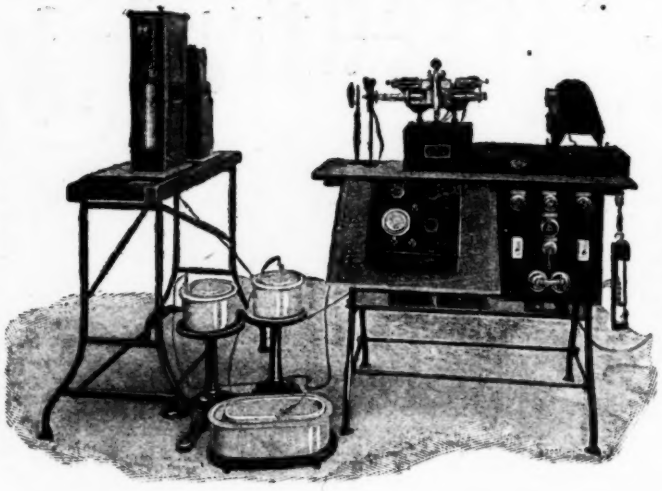

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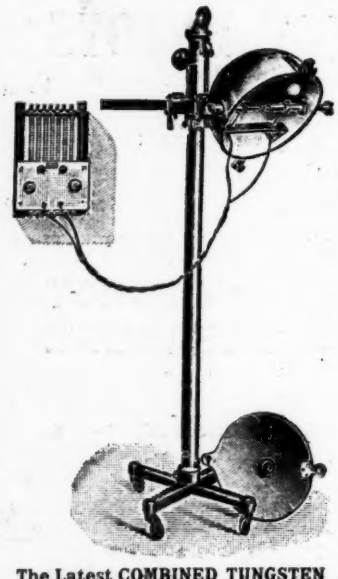

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Remarks
ON
PAINLESS PELVIC SURGERY.

BY

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ALTHOUGH the title "Painless Pelvic Surgery" is employed to express an ideal, yet my object is to show that by appropriate care pain and discomfort after pelvic operations may be so minimized that it is justifiable to speak of a "painless operation." The mortality of pelvic operations has been reduced, but post-operative morbidity has not been diminished in proportion to the low mortality rate. An acute or even a chronic painful illness may follow the operation. It is true that this illness may be short and sharp as measured by duration and intensity, but it is none the less difficult to bear; indeed, the mental impression may long remain, and accentuate the "fear of the knife" for all time, besides exerting a subtle effect on the nervous system which may continue for months or years. Vomiting after an anaesthetic is so common that the suffering of the patients is apt to be ignored or forgotten, yet to them its duration may seem interminable and all the while they are racked with pain.

Even this suffering may be dwarfed by the agony endured in consequence of intestinal distension. To be told that "you must bear the pain," or that "every patient has it," is poor comfort when you feel tearing, grinding, and gnawing in your inside. It should be the aim of the surgeon to do his utmost to prevent post-operative pain so that a painless operation may be followed by a painless convalescence. In the mind of the patient the dread of pain after an operation is greater than the dread of the anaesthetic. To prevent pain and discomfort it is essential that certain precautions should be taken before, during, and after these operations.

PRECAUTIONS BEFORE AN OPERATION.

Abdominal Operations.

It is true that the less a woman is disturbed physically or mentally before an operation the better she will be able to face this trying ordeal. Unless the complaint from which she suffers is urgent she should be admitted into the hospital or nursing home at least forty-eight hours before the proposed operation, and in certain cases a longer interval is required. The practice of admitting a patient in the evening and operating on her the following morning, unless in emergency cases, should be condemned.

If an abdominal operation is to be performed the patient should be kept in bed and should be provided with a suitable diet. A dose of castor oil should be given, if she is constipated, but otherwise the intestinal canal should not be disturbed. To give a purgative the previous night to a woman about to undergo an abdominal operation, and to awaken her at 5 a.m. for an enema and a cup of tea when the operation is to be performed at 8.30 or 9 a.m., is a form of "scientific cruelty" which should be abolished. The employment of enemata before or after pelvic operations is a practice I have never favoured. In certain circumstances it may become necessary to administer enemata, but as a routine they should be avoided. Unless skilfully given an enema may cause considerable shock and distress to the patient, whilst after pelvic operations the proximity of the rectum to the wounded area is an additional reason against their use. No one except her nurse or doctor should see the patient on the day of the operation.

When a bed-pan is used for the first time after an operation there is not merely the difficulty in its use which is due to the operation, but in addition nervousness and apprehension may increase the difficulty. For this reason it is essential that the patient should learn to use a bed-pan for micturition and defaecation during the days preceding her operation. This simple precaution will prevent much pain and discomfort and will often obviate the use of a catheter. A sleeping draught is in the majority of women unnecessary; sodium bromide, 10 or 15 grains in a tumblerful of water, is useful if required.

The time at which an operation should be performed is made to depend on various circumstances, but if it be considered entirely from the point of view of the patient I believe 2 or 3 p.m. to be the best time. The last mentioned hour, however, has the disadvantage of the failing light in the winter, necessitating the use of artificial light should the operation be of long duration. The afternoon operation has the advantage that the first night passes more quickly, whereas if the operation be performed in the morning a long day is succeeded by a still longer night. Moreover, the patient should be permitted to rest undisturbed and not worried in the early hours of the morning by the crude methods of preparation so commonly used. Although individual variations must be taken into account, yet for most women the afternoon is to be preferred. A light breakfast of tea and toast is given at 8.30 and a similar meal at 11 a.m., after which no food is permitted.

The arrangements for dealing with patients about to undergo operations are not satisfactory in most hospitals and nursing homes. The difficulty is not only one of inadequate accommodation, but also of inadequate nursing facilities. To overcome these difficulties the hospital or nursing home must be specially constructed or arranged to facilitate the rapid transference of the patient from her bed to the operating theatre. In a small private hospital for gentlewomen to which I am visiting surgeon the conditions are almost ideal, and a brief description of them may not be out of place.

The patient about to undergo an operation occupies a bedroom on the same floor as the operating theatre. Half or three-quarters of an hour before the operation she is given a hypodermic injection of morphine 1/6 grain and atropine 1/150 grain, her bedroom is darkened, and no one is permitted to see her or speak to her until the anaesthetist arrives to give her the anaesthetic. She is anaesthetized in bed, after which she is placed upon the trolley. The trolley is then wheeled into the operating theatre, a distance of a few yards, and she is carefully lifted on to the operating table. The operating table has the shoulder-pieces padded and a folded blanket is fixed over the central portion of the table by broad webbing laterally and longitudinally, and covered by waterproof sheeting, and pillows are provided for the head.

Much of what may be termed "aseptic discomfort"—uncovered metal tables and trolleys, concrete floors, and so forth—could and should be improved, with great benefit to the patients as suffering human beings and without detriment to the surgical results, immediate or remote. I can only assert that the results which have been obtained in this small hospital have encouraged me in the conviction that all these minor details are of paramount importance, and, thanks to the benevolent lady who presides over this hospital, every detail which would promote the well-being of the patient has been faithfully carried out. These precautions have had a marked effect in diminishing or counteracting post-operative shock and post-operative pulmonary complications.

To employ such a system in a hospital it would be necessary to have several single rooms on the same floor as the operating theatre, for the present method of bringing a patient some distance to an anaesthetizing room, and after operation taking her back again, implies considerable disturbance and exposure to the air of cold and often draughty passages. Yet something should be done to prevent those all too frequent pulmonary complications which in many instances are contracted during this perilous journey. Unless a nursing home is specially constructed such a system is wellnigh impossible, and yet many struggle on even without the assistance of a passenger lift.

Again, the heating of the operating theatre calls for careful supervision. It is difficult to obtain that happy medium between cold and excessive heat, for the latter is not merely trying to the patient but to all those present. A patient, sweating profusely after an operation, who is wheeled out into a cold and draughty passage, is fortunate if she does not develop some pulmonary complication. A cradle covered with a blanket over her head, or other

suitable device, should be employed to retard the ingress of cold air, and a sufficient number of warm blankets should envelop her body.

Vaginal Operations.

Women suffering from genital prolapse require a longer period of rest in bed before operation. The prolapsed uterus and vaginal walls should, as far as possible, be replaced, thus permitting congestion to diminish; at the same time any uterine or vaginal discharge should be treated, as well as any ulcerated or abraded surface.

For the treatment of a vaginal discharge irritating injections should not be used, and the injections should not be too hot. For ordinary routine use an injection of salt solution, 2 drachms to the pint, comfortably warm, is most useful. Hot irritating injections tend to cause oedema of the vaginal walls and delay in healing, with consequent discomfort to the patient.

The present fashion is to shave the vulvar hairs completely before a vaginal operation, and I have known this done even before the removal of a urethral caruncle, whilst it is the common practice before curettage. In the unclean the shaving of the vulvar hairs may be a necessity, but in those of cleanly habit it is not only unnecessary, but too often leads to local discomfort after the operation. Moreover, the vulvar hairs are an important protection, and can be rendered clean and kept clean. Lister did not advise shaving the head in the treatment of scalp wounds; on the contrary, he disinfected the hairs and made use of them as a further protection to the wounded surface. For these reasons I have never favoured routine shaving of the vulva, which is, moreover, distasteful to the great majority of female patients. My results fully justify me in adhering to this opinion.

PRECAUTIONS DURING AN OPERATION.

Abdominal Operations.

I do not believe it is sufficiently realized how much can be done during an operation to prevent post-operative pain and discomfort. If the art of surgery is to develop as it ought, and if it is to become one of the fine arts, then the "tearers" and the "bruisers" must give place to a race of surgeons who will be respecters of human tissues, causing the minimum amount of traumatism, and who will accomplish their task with that refinement of execution known only to the highly skilled artist.

Vision is too often fogged by a display of mortality statistics, and although the day when operations will have no mortality may be not far distant, let us see to it that they will also have no morbidity. The surgeon of the future should be able to assure the patient about to undergo an operation that it is devoid of risk, and that the convalescence will be free from pain and discomfort.

Iodine is probably more frequently used in different parts of the world in the preparation of the skin of the abdominal wall than any other medicament. I have abandoned its use for some years because it tends to cause local irritation, and as a cleansing agent is not so good as methylated spirit and acetone. These agents can be recommended as effective cleansers of the skin which do not cause irritation, provided that the methylated spirit be of good quality.

To avoid the leg-aches, the knee-aches, and the shoulder-aches, it is essential that the patient should be securely fixed when the operating table is elevated into the so-called Trendelenburg position. Few operating tables are capable of affording a correct position, the fault being that they are not provided with leg-pieces. In some the patient, when elevated, hangs by the knees without shoulder supports; in others with shoulder supports the ankles are fixed by a bandage; or again, the legs are elevated and the whole weight of the body is sustained by the shoulder supports. It is thus easy to comprehend why patients so fixed complain of what is called "rheumatism" during convalescence.

The operating table should therefore be provided with leg-pieces as well as shoulder supports. The patient should be so fixed on the operating table when elevated into the Trendelenburg position that the knees are flexed, the thighs slightly flexed and abducted, and the shoulders supported. In this position there is a more equable distribution of strain, and it is surprising how much better the abdominal wall is relaxed. Moreover, ready access is obtained to the vagina should any combined procedure be required, and there is no "rheumatism" during convalescence.

The operating table should be elevated before the surgeon begins the operation, and he should be able to tell by the contour of the abdominal wall if the intestines have descended towards the diaphragm. The patient should be deeply anaesthetized before the incision is made, and if kept under the anaesthetic it will be found, on opening the abdomen, that the intestines have fallen back and a large abdominal sponge can be inserted and spread out so as to retain the intestines in their position. Too often, owing to incomplete anaesthesia and straining, there is a battle between the protruding intestines and the surgeon, ending in the defeat of the former after much handling and exposure, and it is doubtful if as good retraction is ever obtained under these conditions.

The ability to use a knife is one of the greatest achievements of the accomplished surgeon. If the tissues of the abdominal wall be cut cleanly with a sharp knife they heal better, they are easier to coapt by stitches, and subsequent pain is diminished. When the abdomen is opened the abdominal incision should not have the appearance as if it had been eaten by rats. A sharp knife should also be used for the separation of adhesions, and not scissors, or, worse still, a gauze sponge.

Both the skin and the divided abdominal wall should be protected. After a trial of various materials I have come to the conclusion that the best protector of the divided abdominal wall is the peritoneum. For this purpose sterilized cloths are fixed by toothed forceps to the parietal peritoneum. The abdominal wall and skin being protected, and the intestines completely covered, the contents of the pelvis are exposed to view. The large abdominal "sponge" (made of lint) is steeped in hot normal saline solution, and no irritant fluid is used within the abdominal cavity. Large abdominal retractors of the self-retaining pattern are best avoided on account of the injury they do to the parietal peritoneum by pressure. Indeed, the less the abdominal wall is retracted by instruments the better for the future comfort of the patient.

In a paper entitled "Suggestions for the prevention of post-operative embolism and thrombosis"[1] I have already indicated many points in technique which not only prevent embolism but also prevent post-operation pain. Amongst the foremost of these are: (1) the avoidance of transfixion and puncturing of blood vessels; (2) accurate haemostasis; and (3) the avoidance of mass ligatures.

It is a good rule in surgery "never to transfix a vascular area," and the reasons why this rule should be observed are fully set out in this paper.

Accurate haemostasis is one of the most important means of preventing pain, for blood effused into the peritoneal cavity probably causes more pain than any other fluid, even more than that produced by the gastric or intestinal contents. Blood effused under the peritoneum—as, for example, after the operation of supravaginal hysterectomy where the haemostasis has been incomplete—probably causes pain by tension and stretching of the peritoneum should the sutures effectually prevent the blood escaping into the peritoneal cavity.

Effusion of blood into the abdominal wall from incomplete haemostasis is a common cause of pain. This effusion causes tension, and is evidenced at a later stage by the formation of a haematoma. For this reason it is wise to tie or twist bleeding points in the abdominal wall, especially at its lower end, and to make sure that all haemorrhage is arrested. It is a good plan to place a gauze sponge, held in long forceps, at the bottom of the pelvis before the operating table is lowered from the elevated position. The object of this sponge is to soak up any blood which has collected, as well as to indicate if additional bleeding has occurred after the horizontal position is resumed. If there be any bleeding it is likely to be increased during vomiting and straining as well as from the vascular reaction which occurs after every abdominal operation of any severity. Although this amount of bleeding

may not endanger the life of the patient, yet it causes pain, and should be prevented.

I believe it to be important to lower the operating table into the horizontal position before suturing the abdominal wall, and to "arrange" the abdominal contents so that the sigmoid colon covers the pelvic cavity, and the omentum is spread over the intestines. The withdrawal of the large abdominal sponge should be delayed until the peritoneum is partly stitched, and if the sponge be pulled gently downwards towards the symphysis pubis the omentum comes down with it. Chilling and exposure of the intestines are thereby diminished.

Subcutaneous emphysema may result from neglecting to lower the elevated table, and may cause considerable discomfort for some days. Again, volvulus of the small intestine, with accompanying signs of intestinal obstruction, may result from a similar cause, whilst it is difficult to be certain that all haemorrhage has been arrested when the abdomen is closed with the pelvis elevated.

The wound in the abdominal wall is a great source of pain, and too much care cannot be taken to cut cleanly, to avoid bruising and tearing, and to arrest all bleeding. The method of suturing is all-important, and here it is not so much the material used as the manner of its use that matters.

Stitches only act as splints, and yet how often this is forgotten. It is "Nature's glue" which produces union, and without this assistance all the efforts of the surgeon would be vain. The function of a suture is to maintain the opposing surfaces in apposition, and Nature does the rest. In suturing there should be that nicety of adjustment, that apposition without constriction, which is the hall-mark of the finished craftsman. The peritoneal edges should be apposed by a suture which is not pulled too tight and by which the edges are not constricted, and thus the thinnest suture material can be employed without breaking it. Again, the type of through-and-through abdominal suture in common use causes considerable pain. It is inserted at a distance of an inch or more from the cut edges, taking up skin, fat, fascia, muscle, and sometimes peritoneum, and then is tied firmly, encompassing within its grasp a mass of tissue which writhes and struggles in vain until relief comes with removal of the suture.

To overcome this difficulty I have used for some years a figure-of-8 suture of silkworm gut. It is inserted on one side, a quarter of an inch from the skin margin, passing through skin and fat, then it is passed through fascia and muscle on the opposite side, taking a good grip of both, and again through muscle and fascia on the same side, and finally through fat and skin on the opposite side, emerging a quarter of an inch from the skin margin. A piece of fine india-rubber tubing half an inch in length is threaded over one end of the suture, which is then tied so that the skin edges are apposed—not constricted—and the small piece of rubber tubing lies flat upon the line of the incision. Sutures so inserted may remain in position for fourteen days or longer. Preliminary scratching of the skin at intervals across the position of the incision ensures accuracy in suturing.

Before the figure-of-8 sutures are tied the muscle and fascia are united by catgut, continuous or interrupted according to requirements, and the skin by Michel clips. In the application of these clips it is essential that the skin edges be apposed and not crushed. Crushing not only causes pain, but redness and sloughing. If clips be carefully applied they may be left in position for a week without even causing redness of the skin edges. Skin edges apposed and not crushed heal rapidly without pain. A dressing of double cyanide gauze fixed in position by collodion is then applied, care being taken that only the edges of the covering layer of gauze are so fixed. A pad of wool and a many-tailed bandage complete the dressing.

The practice of fixing the gauze dressing by means of the through-and-through sutures has such obvious disadvantages that it cannot be recommended.

Vaginal Operations.

As already mentioned, it is important to use non-irritating antiseptic solutions and to see that they are not too hot, in order to prevent oedema of the tissues and subsequent discomfort. After thorough cleansing of the vulva it is disinfected with acetone followed by mercury biniodide solution 1 in 2,000. The vagina is swabbed out with the mercury biniodide solution and then thoroughly dried with gauze sponges. I believe many vaginal operations fail through neglecting this simple precaution, for moisture in this region favours septic infection.

Haemostasis is of paramount importance in vulvar and vaginal operations. Bleeding points should be caught and tied, not left to chance. Secondary haemorrhage is far too common after these operations, many of which are regarded as minor operations, and sufficient trouble is not taken to see that all bleeding is stopped. There may be troublesome vaginal haemorrhage after the operation of colpoperineorrhaphy, or the effused blood may form a haematoma in the perineal tissues, causing local pain and discomfort. Such results may be due to septic infection or the neglect to tie or crush bleeding vessels, especially veins. After the operation of colpoperineorrhaphy the bleeding usually comes from two small arteries at the apex of the triangular flap, excised from the posterior vaginal wall. The patient complains of pain, she is restless and somewhat blanched, often unable to urinate, and yet her vagina may be distended with clotted blood, although the amount of external blood loss is small.

Secondary haemorrhage is still more frequent after operations on the cervix uteri. Cervical tissue heals slowly and its blood vessels have a tendency to retract within its substance, thus favouring secondary haemorrhage. From a study of the writings of the older authors secondary haemorrhage does not appear to have been a common complication of operations on the cervix uteri because a non-absorbable suture, most frequently silver wire, was used which was allowed to remain until healing was complete. The modern use of catgut is responsible for much secondary haemorrhage, because too often the catgut melts before Nature has glued the apposing surfaces together. If catgut be employed it must be forty-day chromic catgut, but who can guarantee that it will hold? I have obtained the most uniformly successful results in operations on the cervix by the use of silkworm gut, but unfortunately such sutures require to be removed, whereas catgut becomes slowly absorbed and does not require removal. If the catgut employed will remain for the requisite time secondary haemorrhage will not occur, but who can tell when it is reliable? The announcement that the catgut will last forty days is a pious opinion; it is not always a statement of fact.

For the major vaginal operations of hysterectomy and colpotomy accurate haemostasis is one of the secrets of success. "Get it dry and keep it dry" should be the guiding principle in vaginal surgery.

Women appear to dread perineal operations more than any other. They seem to have heard of the pain following the operation, of the pain when the stitches are removed. Their fears are certainly justified unless the surgeon takes special precautions to prevent pain. A perineorrhaphy may be, and often is, one of the most painful operations in surgery, yet with care the pain can be prevented. The perineum should be stitched in the same manner as the abdominal wall. To constrict tightly a mass of perineal tissue within the grasp of a suture is to cause not pain but agony—agony which is accentuated by the oedema of the tissues which supervenes.

The through-and-through sutures, which should be of silkworm gut, should be inserted, and should emerge a quarter of an inch from the margin of the incision, and after the superficial skin sutures of catgut have been inserted and tied the silkworm gut is tied, one end being threaded through rubber tubing as in the abdominal wall. The common error is to constrict an unnecessarily large amount of skin within the grasp of the suture and to pull it too tight. The sutures must be tied with that nicety of adjustment which comes with practice and experience.

It may be urged that by the use of catgut only pain is prevented. This is true—if the catgut were always reliable; but even if it were, infection may defeat the efforts of the surgeon. I consider it essential in these operations to use a non-absorbable suture, which not only acts as an efficient splint but also as a second line of defence to the catgut sutures.

The nicety of adjustment to be achieved in suturing the perineum is most important in the recent tears following childbirth, where a certain amount of oedema is constantly present. I have often been told by practitioners that they have abandoned silkworm gut because it "cuts out." The real explanation, however, is that the suture has been pulled too tight, and that the oedema which follows has made it tighter, and it cuts the tissues, meanwhile causing unnecessary suffering to the patient. Interrupted catgut sutures fortified by silkworm gut yield the best and most certain results in this department of surgery.

Curetting is an operation which should not be followed by pain if care be taken. Pain may be produced through the character of the cervical dilatation, the vigorous use of the curette, or the application of irritants to the interior of the uterus.

1. *The Character of the Cervical Dilatation.*—The tissues of the cervix should be slowly stretched by the cervical dilators; this stretching is only possible up to a certain size of the dilator employed, and this size varies according to the dilatability of the cervix. Large dilators do not dilate—they lacerate; and not only haemorrhage, but pain, follows this accident—pain which may persist in consequence of cicatricial tissue forming in the cervical wall and parametrium. The preliminary use of a glycerin ovule, pushed up against the cervix, aids materially in softening cervical tissues whose consistence, as detected by a local examination, suggests interference with easy dilatation.

2. *The Vigorous Use of the Curette.*—A sharp curette may cause chronic uterine pain through the excessive removal of uterine tissue. It should not be used for the body of the uterus, but should be reserved for the cervix. The curette should be held lightly in the hand, and should be used more as a rake than a scraper; this is especially necessary in the post-abortion uterus. The possibility of perforating the uterus and of causing tubal inflammation must be borne in mind by the inexperienced.

3. *Application of Irritants to the Interior of the Uterus.*—It is difficult to understand why this useless procedure is continued in the practice of gynaecology. The only apparent result is that the patient has uterine pain for three or four days after the curetting. It is sufficient for all practical purposes to dry the interior of the uterus, or if it bleeds freely to introduce a gauze plug to arrest the bleeding. The gauze plug is removed at the end of twenty-four hours, and no further local treatment is employed.

PRECAUTIONS AFTER AN OPERATION.

Abdominal Operations.

The patient should be placed in a warm bed upon her side, with one pillow under her head, so arranged that the act of vomiting may be facilitated—that is, with the head slightly inclined forwards, resting on the edge of the pillow. To place a patient in the dorsal position and twist her neck on one side as soon as she begins to vomit is not the last word in surgical art. There may be reasons for adopting other positions, but it must always be borne in mind that the dorsal decubitus interferes with vomiting, and even in the so-called Fowler position, employed many years ago at the Samaritan Free Hospital by Sir Spencer Wells, if the patient lies on her side the act of vomiting is facilitated.

Vomiting still remains one of the most troublesome sequelae of an anaesthetic. I have made many attempts to prevent post-anaesthetic vomiting by drugs and by washing out the stomach on the operating table, but have come to the conclusion that it is best to encourage vomiting and rid the stomach of the ether-laden mucus, which seems to collect even after the stomach has been washed out. For this purpose copious draughts of sodium bicarbonate and water should be given, and ordinary water, hot or cold according to the desire of the patient, swallowed (not sipped) *ad libitum*. Moreover, when vomiting does not occur, nausea may continue for some days, accompanied by distaste for food, which is even more trying to bear.

The amount of post-operation pain when the foregoing precautions have been taken is so trifling that even an injection of morphine is rarely required. However, if there be severe pain which persists, it is wiser to administer an anodyne and repeat it rather than to allow the patient's suffering to continue.

After the first night the amount of what may be termed "traumatic pain" is, after a carefully performed operation, comparatively trifling. Another factor, however, comes into play—to wit, intestinal pain. This is prevented by the careful covering of the intestines, thus preventing exposure with consequent drying and chilling, the avoidance of drastic purgation before the operation, and the early administration of solid food after the operation.

I think I may fairly claim to have been a pioneer in advocating the early administration of solid food after abdominal (gynaecological) operations. Solid food cleans the mouth better than any mouth-wash; it stimulates peristalsis and encourages the bowels to act naturally. Those who have seen, as I have seen, the older methods of treatment, where patients were fed for days on a liquid diet, are able to appreciate the advantages of solid food. Foul mouths, often followed by parotitis, intestinal pain and distension, obstinate constipation—all these, together with general malaise and wretchedness, combined to make the patient look and feel the victim of a severe illness. All this has been changed through the improvement in the methods of pre-operative, operative, and post-operative care, and amongst the last the early administration of solid food is of first-rate importance. In all my cases of intestinal suture, whether of the small or the large intestine, solid food has been administered after the post-anaesthetic vomiting has ceased, and with the happiest results.

Moreover, I would plead for the systematic dieting of patents who have undergone abdominal section. Briefly, their diet should be so planned that those foods which, singly or in combination, tend to the production of flatulence should be excluded. Too little attention is paid to this most important question, yet for the comfort of the patient it is essential that a suitable diet should be prescribed by the surgeon instead of leaving the task to others.

I suppose no subject has been more frequently debated than that of the administration of purgatives after abdominal section. The time at which a purgative is first administered varies in the practice of different individuals, some giving purgatives at once, others after three days, and so on. I have always advocated "leaving the bowels alone" until the patient is uncomfortable, and then she receives a dose of castor oil. My reason for so doing is that rest is the best therapeutic agent in medicine, and I decline to believe that an early movement of the bowels, with the pain, difficulty, and discomfort it entails, is in the best interests of the patient. Moreover, the disturbance in the abdomen through increased intestinal peristalsis and movement may interfere with reparative processes, whilst the employment of purgative enemata is still worse. For these reasons it is best to refrain from purging the intestine for four or five days, and then a purgative may be given if the bowels have not acted naturally. After the bowels have acted it is wise to ensure a daily action by means of a laxative, which will be found to cause little, if any, discomfort when a preliminary period of rest has been enjoined.

Yet another debated question is: When should the patient be permitted to get out of her bed after an abdominal operation? My answer is that she should be permitted to get out of her bed on the seventh day, provided always that she is having an uninterrupted convalescence. I dress the wound for the first time on the seventh day and remove the Michel clips. The patient is then permitted to leave her bed, unassisted if possible, and sit in a chair for half an hour and then return to bed. This is continued daily, the length of time being gradually increased, until the wound is again dressed on the fourteenth day, when the through-and-through sutures are removed. During the following week the patient walks about her room or in her ward, gradually increasing the amount each day, and this is continued for yet another week, when she is discharged, being then able to walk erect with confidence. I was led to adopt this method after observing the "bent up" women with unsteady gait, emerging from hospitals and nursing homes, whose prolonged rest in bed had materially affected their power of locomotio-

This "early rising," however, possesses still further advantages: it stimulates the circulation, thereby aiding in the prevention of post-operative embolism and thrombosis; it promotes the coaptation and healing of the abdominal wound; it prevents or alleviates those difficulties in micturition so commonly experienced after extensive pelvic dissections; and, by giving the patient hope and confidence, the bodily functions are improved, so that she not only sleeps better but digests and assimilates her food better.

The effect on the abdominal wound is quite remarkable, for I have seen the edges so pressed together in an obese patient that the small pieces of rubber tubing were completely hidden from view. When the dorsal position is maintained for any length of time there is a tendency for the edges of the incision to be dragged asunder, often aided by a varying amount of intestinal distension, whereas the contraction of the recti muscles brought into play in assuming and maintaining the erect posture of the trunk serves to coapt the edges. Although no apparent change may be observed in the skin, yet the subjacent fascia, and more often the muscle, may have undergone separation. This is evident long after the operation, and may be demonstrated by placing the hand over the incision with the patient in the dorsal position, and then asking her to raise herself, when it will be found that the muscles are not united and there is not infrequently a bulging produced along the line of the incision. For all these reasons I have become a strong advocate of "early rising" whenever permissible. I do not, however, believe in permitting patients to leave the hospital or nursing home too soon, for it is to their interest to be kept under observation until they are able to walk with confidence. The practice of "early getting up" and "early getting out" is not to be recommended.

As the use of a catheter, especially if not skilful, causes both pain and discomfort, every effort should be made to favour the natural action of the bladder, whilst the danger of infection is an additional reason for avoiding a catheter. The removal of the Michel clips and the through-and-through sutures should be practically painless, if properly done. The early removal of the through-and-through sutures deprives the wound of the advantages of a splint, whereas if they are not removed and the patient gets up, firmer union is obtained. It only remains to be added that the dressing of antiseptic gauze fixed in position by collodion is removed after the collodion is dissolved by acetone, thus rendering the removal painless.

Vaginal Operations.

The routine employment of douches after vaginal operations is not to be recommended. Indeed, the less that is done in the way of local treatment or manipulation the better for the patient. The use of an antiseptic "wash" after defaecation or micturition is helpful in favouring local cleanliness, and the employment of a special dusting powder favours dryness and relieves pain.

To the patient the most dreaded event is the removal of the perineal stitches, but if these are tied over small pieces of fine india-rubber tubing the removal of the stitches is painless. Where stitches have become embedded through constriction and subsequent oedema their removal may not only be very difficult, but very painful.

Both in incomplete and especially in complete perineal tears I believe it is best to leave the bowels undisturbed for four or five days in order that healing may be uninterrupted.

The other details in the after-treatment of vaginal operations should always be carried out so as to avoid pain and discomfort to the patient. A longer period of rest must be enjoined after operations for genital prolapse, in order that the newly united tissues may become thoroughly consolidated before the erect position is assumed. It is wise to keep such patients in bed for at least three weeks.

Although I must plead guilty to having dealt with what may be regarded as trivialities, yet, after all, it is the little things that matter. Too often it is forgotten that an operation is to the surgeon but a part of his daily work—to the patient it is a great adventure.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, March 9th, 1918, p. 277.

A STUDY OF THE EFFICIENCY OF STERILIZATION OF DRESSINGS.

BY

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INTRODUCTORY NOTE

BY

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THE honorary surgical staff of the Jessop Hospital, Sheffield, watched the experiments described in the paper by Mr. R. J. B. Hall and Mr. A. W. Chapman with great interest. They were satisfied that the observations and deductions were correct. It is valuable to have obtained corroboration of the suspicion that the permeability by steam of surgical dressings, etc., is greatly influenced by the nature of the container and the compactness of the contents. Lightly packed hessian bags are evidently much more easily sterilized than tightly packed metal drums.

However, the chief interest lies in Mr. Chapman's clever device for detecting not only the highest temperature reached, but the duration of time for which that temperature has existed. Most surgeons must have desired such a control. Here it is to hand, and it can be easily and inexpensively employed, as the tubes only cost 40s. to 50s. a gross.

At the Jessop Hospital these controls have been constantly employed for over a year and the surgical staff derive great comfort from their use. They take this opportunity of thanking Mr. Chapman and Mr. Hall for the skill and trouble displayed by them in inventing the control and in elucidating the details of its correct use.

OBJECT OF INVESTIGATION.

If a package or drum of dressings is to be sterilized efficiently the steam must penetrate to the centre of the package and raise it to a temperature sufficiently high to destroy any micro-organisms present. In addition to the occasional use of maximum thermometers, many tests have been employed to indicate the temperature in the centre of the dressings. Usually they depend on the fusion or rapid colour change of an organic compound, or, more recently, on the fusion of small pieces of standard alloys.[1]

If complete security is to be attained, the materials to be sterilized must not only be raised to a sufficiently high temperature, but must be kept at that temperature for a certain length of time. All the tests previously employed suffer from the common disadvantage of recording only the maximum temperature in the dressings, without giving any indication of how long it has been maintained. A simple type of indicator has been devised, the readings of which depend both on temperature and time, and hence give a more trustworthy index of the efficiency of sterilization than one recording temperature alone.*

Indicator for Checking Sterilization.

The indicator consists of a small, stout, sealed glass tube containing a few drops of a standard solution of glucose and sulphuric acid. When heated to a sufficiently high temperature the solution slowly darkens in colour and finally chars. The concentrations of acid and glucose are so adjusted that at 212° F. the change in colour is very slow, whilst at 239° F. the solution becomes straw-coloured after five minutes, bright yellow after ten minutes, deep brown after twenty minutes, and nearly black after thirty minutes.

A series of experiments was carried out to determine whether the colour developed in the test solution was a satisfactory index of sterility under the ordinary conditions employed for dressings. A number of sterilizing drums

* The device is made and sold by Messrs. Albert Browne, Ltd., Chancery Street, [illegible]

were packed with gamgee tissue and towels, some tightly, others loosely, and among the contents of each drum one or more of the control tubes were enclosed. Beside each control tube was placed a small glass tube containing a sporing broth culture of *Bacillus subtilis*. The drums were treated at various pressures for different times in a pressure steam sterilizer and then opened. The control tubes were matched against a colour scale prepared from tubes heated at 239° F. for known times, and the culture tubes were opened under aseptic conditions and subcultured to test for sterility. In all, 47 comparisons were carried out, the results of which are summarized in Table I.

TABLE I.

Group.	Number of Tests.	Subculture Results.	
		Sterile.	Growth of B. subtilis.
A. Colour of control tube indicates exposure to 239° F. of 20 minutes or more	24	23	1 (?)
B. Colour of control tube indicates exposure to 239° F. of between 10 and 20 minutes	9	7	2
C. Colour of control tube indicates exposure to 239° F. of less than 10 minutes	14	0	14

It was therefore concluded that when the colour of a control tube enclosed in a package of dressings corresponded with exposure to 239° F. for not less than twenty minutes, the material had been efficiently sterilized, whilst a lighter colour indicated at best doubtful efficiency.

Factors Influencing the Penetration of Steam into Dressings.

A few preliminary tests showed that under ordinary conditions steam frequently fails to penetrate to the centre of a drum of dressings even when these are not very tightly packed. This observation has recently been confirmed by Black.[1]

Experiments were accordingly carried out to determine the factors influencing the penetration of the steam through the dressings. It was found that the tightness of packing was one of the most important. How tightly a drum may be packed with safety depends on various considerations, such as size of the drum, the degree of evacuation attainable, the nature of the material to be sterilized, and the pressure of steam and duration of heating which can be employed without damaging the outer layers of dressings. Efficiency can only be attained by trial in each case, but the following experiment illustrates the bad effect of packing too tightly.

Experiment on Packing.

Three metal drums, each 11 by 9 by 9 inches, were packed evenly with gamgee tissue. The drum which was most tightly packed contained roughly twice as much as that most loosely packed. Control tubes were placed in each drum in the positions indicated in the table and in some cases were accompanied by small maximum thermometers. A control tube and thermometer were also placed unprotected inside the sterilizer to afford a check on the conditions outside the drums. All three drums were sterilized simultaneously. The sterilizer was first evacuated to a negative pressure of 10 inches of mercury, and steam was then admitted. The process was completed by drying in a current of hot air for one hour. The results obtained are shown in Table II, the control tube readings being expressed as number of minutes' exposure to 239° F.

It will be seen that whilst it was possible to obtain adequate penetration of the steam even into the most tightly packed drum, the length of time necessary to produce efficient sterilization in this case was so long that the outer layers of material would soon be damaged by repeated treatments. Similar experiments with linen towels and cotton abdominal sheets yielded completely analogous results.

Comparison of Drums and Bags.

Experiment showed that, within the limits found in the types of drum commonly used, variation in the area of the holes for the entrance of steam made little difference to the penetration. When, however, the dressings were enclosed in a hessian bag of similar size and shape to the drum, the increased area available for the entrance of the steam resulted in greatly increased penetration. There can be no doubt that, whatever the disadvantage of bags for storage purposes, they are much more efficient than metal drums for the actual sterilizing process.

TABLE II.

Drum and Weight of Contents.	Position of Control Tube and Thermometer.	Heating 1. 20 mins. at 15 lb.		Heating 2. 20 mins. at 20 lb.		Heating 3 1 hour at 20 lb.	
		Max. Temp.	Tube Reading (mins.).	Max. Temp.	Tube Reading (mins.).	Max. Temp.	Tube Reading (mins.).
		°F.		°F.		°F.	
A.—1 lb. 12 oz.	1. Middle of drum one-third way up	235	10	246	10		
	2. Middle of drum two-thirds way up	243	20	243	10		
	3. Edge of drum against holes at side	—	20	—	30+		
B.—2 lb. 10 oz.	4. Middle of drum one-third way up	178	2	199	6		
	5. Middle of drum two-thirds way up	204	4	205	8		
	6. Edge of drum against holes at side	—	30+	—	30+		
C.—4 lb.	7. Middle of drum one-third way up	176	2	181	4	266	30+
	8. Middle of drum two-thirds way up	176	4	187	4	261	30+
	9. Edge of drum against holes at side	—	30	—	30+	—	—
Control	Uncovered in sterilizer	246	30	257	30+	263	30+

Conclusions.

To ensure efficient sterilization it is necessary that the articles be packed loosely in bags or in adequately perforated drums. The pressure of steam and time of sterilization must be adjusted according to the material being treated so as to ensure complete penetration without damage to the goods.

Satisfactory control of the process can best be assured by placing in the centre of the materials an indicator such as that described, the changes in which depend both on temperature attained and the duration of exposure to that temperature.

We desire to express our thanks to Miss C. D. Tingle, M.B., Ch.B., who kindly conducted all the bacteriological examinations.

REFERENCE.

[1] Black: A Weak Point in Sterilizing Methods, BRITISH MEDICAL JOURNAL, 1925, i, 210.

A CLINICAL STUDY OF ENCEPHALITIS LETHARGICA,

BASED ON SIXTY-TWO CASES.*

BY

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THE present outbreak of encephalitis lethargica was admirably described by Von Economo[1] in May, 1917, in a classical description in which somnolence, ophthalmoplegia, and profound asthenia are given as diagnostic criteria. It must not, however, be forgotten that even in April, 1917, Cruchet, Montier, and Calmette recorded a series of 40 cases of "subacute encephalo-myelitis" before the Société Médicale des Hôpitaux de Paris[2]; these cases had occurred in the winters of 1915-16 and 1916-17. Thus the disease was recorded in France and Austria almost at the same moment.

Dr. Crookshank[3] traces the disease back to the time of Hippocrates, and shows that during the last 450 years there have been a number of epidemics in various countries of Europe. It is worthy of note that during the twenty or

* A paper recently read before the Liverpool Medical Institution.

thirty years prior to 1917 several isolated cases of encephalitis had been described, but their significance was not detected at the time.[4]

The epidemic nature of encephalitis lethargica indicates that the disease is due to a specific organism. The work of Loewe and Strauss, confirmed by Thalhimer, Levaditi, Harvier, McIntosh, Turnbull, Ottolenghi, D'Antona, Tonietti, and others, merits the highest commendation of having established the closest relationship between organism and disease.[5] The two first claim to have discovered the specific organism. Crookshank and other authorities have drawn attention to the relation of outbreaks of encephalitis with epidemics of influenza. I would suggest that the obscure conditions which favour an epidemic of one disease may at times also favour the outbreak of the other. It remains for the bacteriologists to complete the separation of the two diseases.

FIG. 1.—Case 47.

Clinically, it is to be noted that the headache of influenza is usually frontal, whereas that of encephalitis is not uncommonly occipital. Moreover, not infrequently the feverish commencement of a case of this complaint may be labelled influenza—especially if the two diseases are coincident. Undoubtedly the majority of the cases of encephalitis on which this paper is based have occurred when influenza has been conspicuous by its absence, and in none of them has a history of true influenza in the individual or his family been proved. It appears to me that the headache of influenza may be a form of influenzal encephalitis.

The infectivity of the disease is apparently very low, but, as Dr. Stallybrass[6] has recorded, a few instances of severe infection have occurred in institutions, and, as he says, "pointed to the possibilities of the disease." During this year I have seen four instances of more than one patient in a family affected with the disease:

A young married woman was suffering from a severe form of the hyperkinetic variety; her mother complained of headache, lethargy, and weakness, accompanied by nystagmus, tremor, and paresis in the right hand; and the grandmother had headache, lethargy, nystagmus, and ptosis.

A schoolboy, aged 12, developed an acute pharyngitis, headache, and fever, followed shortly by sleepiness and delirium, when ptosis, squint, and nystagmus became evident. A few days later his mother became ill with headache, drowsiness, delirium, and nystagmus.

A man and his stepson in one house, and two women and a baby in another, were affected about the same time.

Five of these cases, though showing quite definite symptoms, were mild, and should be classed in the abortive group. They occurred in Dr. McNeil's practice. It is probable that many people suffering from the abortive type exist, but are not detected.

Most authorities think that the mode of entry of the organism is by one or other mucous membrane, most probably the mucosa of the naso-pharynx as demonstrated by Strauss. In many of my cases severe pharyngitis has been found. In one patient acute rhinitis with haemorrhage, in another severe stomatitis, in a third intense conjunctivitis, and in four diarrhoea occurred at the commencement of the illness.

FIG. 2.—Case 50.

Moreover, the various cases can generally be separated into an acute, subacute, or chronic variety of the disease. The acute and subacute varieties are in the great preponderance of cases that interest us here, but three at least may be classified as chronic. Wimmer has just published an interesting monograph[7] on chronic epidemic encephalitis, in which he truly says that "the cases may be and often are of a chronic and insidious nature from the very beginning." In other words, chronic encephalitis may be said to be an encephalitis with non-febrile course. There is no doubt that we are now meeting with patients whose illness begins with a gradual and insidious onset, in which there is no history of fever, and which appear to be very chronic in type. Such is case No. 50, who states that her condition began gradually, without any fever for several months, and that she has been ill for two or more years. At what date an acute or subacute case with prolonged symptoms should be called chronic is sure to be a debatable question.

There seems to be no discrimination between the sexes: in these cases there have been 26 males and 36 females. The annual incidence of these patients is:

Annual Incidence.

Year.	Cases.	Year.	Cases.
1919	2	1922	3
1920	1	1923	13
1921	2	1924	41

It is considered that after adult life is reached there is a diminishing liability to infection. The age incidence of these cases according to decades illustrates this pretty clearly, but at the same time it also strongly demonstrates that no age is immune: the youngest patient was 14 months, and the oldest 82 years of age.

Age Incidence in Decades.

Age.	Cases.	Age.	Cases.
0-10	4	50-60	9
10-20	15	60-70	4
20-30	14	70-80	1
30-40	7	80	1
40-50	7		

The mode of onset is very variable: frequently it is *sudden*.

For instance, Case 37 was struck down with headache and giddiness whilst riding a bicycle, and was found lying by the roadside in a collapsed condition. He was found to be suffering from stupor, delirium, and pyrexia. Another case, No. 61, complained of headache, went off to sleep at her work, and could not keep awake when roused. A third case, No. 18, after previous headache, became suddenly semi-conscious and appeared to be suffering from apoplexy, until it was found that he could be roused and move his limbs. Case No. 13, a woman aged 19, returned home from work and suddenly developed twitching of the legs, followed a day or two later by twitching of the arms, delirium, sleeplessness, and restlessness. In fact, she was an example of the severe hyperkinetic group. The sudden onset of two ataxic cases is mentioned later.

Other cases begin with fever, headache, and drowsiness. Thus, of 62 cases, 27 give a history of *sudden* onset; 15 an onset which could be described as *quick* (within eight days); and in 20 cases the onset was over eight days, and they are therefore classified as *gradual*.

Case No. 47, a woman aged 21, who had marked Parkinsonian syndrome with monotonous voice, twitching of the limbs, and tremor of the tongue, gave a history of gradual onset of many months' duration (Fig. 1).

Case No. 48, a well developed girl aged 15½, complained of sore throat, feverishness, and depression for three weeks before the definite acute symptoms showed themselves.

Case No. 50, a woman aged 67, stated that her condition of lethargy, nystagmus, partial ptosis, Parkinsonian syndrome, and rigidity had taken months to develop (Fig. 2).

It is extremely difficult to classify the cases of encephalitis lethargica into different groups or types. The classification given by the American Association of Research appeals to me as best covering the ground, therefore I adopt it.

Clinical Types.

I. Somnolent-ophthalmoplegic type (febrile or afebrile).
II. The paralytic (akinetic or hypokinetic) type.
III. The amyostatic type (Parkinson-like and cataleptic syndromes).
IV. The hyperkinetic type (myoclonic, choreic, and epileptic forms).

V. The psychotic type (delirious, maniacal, and depressive forms).
VI. The hyperalgesic type (painful forms).
VII. The tabetic type (Argyll Robertson pupils with loss of deep reflexes and sometimes with lancinating pains).
VIII. The ataxic type.
IX. The abortive type (formes frustes: imperfect, rudimentary, and ambulatory forms).
X. The aberrant type (intestinal, cutaneous, vagal forms, etc.).

Even with that grouping it is noted that individual cases may belong to two groups, either at the same time or at different periods of illness. Thus, Case 14 belonged to the hyperkinetic and ataxic groups, and Case 16 at one time to the hyperkinetic and later on to the amyostatic group.

The most common type of case has been a combination of the somnolent-ophthalmic and amyostatic types—namely, patients who suffered from lethargy or stupor, external ophthalmoplegia (of which nystagmus, ptosis, squint, and diplopia were evidence, the frequency being in the order in which they have been named), and who had the Parkinsonian syndrome more or less marked, but without tremor. Delirium in a greater or lesser degree was a noticeable feature in many of these cases. In three instances the patients were sleepless and restless at night and drowsy during the day. This condition is more frequently found in children, as in a boy aged 8—Case 54 (Fig. 3). Internal ophthalmoplegia is also sometimes present, and was the only ocular disturbance in Case 61.

FIG. 3.—Case 54.

One patient, Case 16, was choreic, restless, and sleepless for one week, and then changed into the type mentioned above; in the first stage her reflexes were exaggerated, and in the later stage they were diminished. Case 53 was the reverse type, as he was at first somnolent and later hyperkinetic.

Of the 62 cases, the first two, middle-aged men, were affected in 1919. Both were a combination of the paralytic and amyostatic types with Parkinson's syndrome (*minus* athetosis) and had cataleptic stupor well marked. Ptosis, nystagmus, and some squint with sluggish knee-jerks confirmed the diagnosis. Both patients dropped off to sleep during the examination, and showed no interest beyond asking in a monotonous whisper if they would recover. A similar case (No. 12), also a male, aged 51, was an in-patient in my wards in 1923. He lay in a deep stupor—almost coma—just swallowing liquids for several weeks, with expressionless face, dropped jaw, double ptosis, and paralysis of the left external rectus.

One other such case should be mentioned, an old gentleman aged 68 (Case 18), who had small pupils, marked ptosis, nystagmus, and lay in a cataleptic stupor from which he could only be roused by shouting. His temperature was 102°, and he gradually passed into deep coma and died. (Dr. Robertson Dunn's patient.)

Early in 1923 Group IV, the hyperkinetic type of case, became evident, in which severe restlessness, insomnia, choreic movements, rhythmical twitchings of muscles and of the limbs, were pronounced symptoms. Of 17 such patients, 3 showed marked dyspnoea. One (Case 13) had respirations of 70 to 80 a minute for eleven weeks, and another

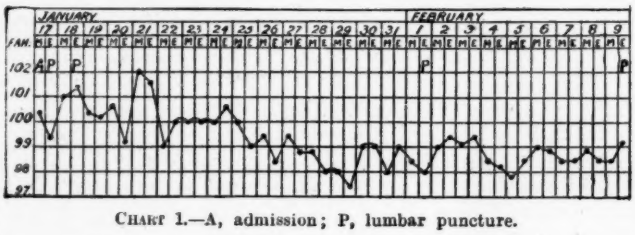

CHART 1.—A, admission; P, lumbar puncture.

(Case 8) of 30 or over for fourteen weeks. It was noticeable in these two most dyspnoeic patients that a rhythmical contraction of the right arm and leg occurred with each inspiration. Several cases had retraction of the head with or without rigidity and stiffness in the limbs; in one the deep reflexes were exaggerated, and Kernig's and Babinski's signs were present. Lumbar puncture was performed on 6 of these patients. In each instance a clear colourless fluid was withdrawn under pressure, in which no micro-organisms were found, but an increase in the number of mononuclear cells (Chart 1).

Two patients had marked myoclonic contractions of the lower jaw muscles, the rhythm of which varied from time to time, but was more or less constant except during sleep. Marked depression was found in two cases, and this quickly passed off under treatment (Cases 48 and 54—Chart 2). Mania was present in three cases only.

One patient only can be classed in Group VI—the hyperalgesic type (Case 11). This was a man, aged 33, who was suffering from the usual symptoms, but his chief complaint was shooting pains down his limbs and in his back and head. This man steadily improved, and after three months was able to leave the hospital free from pain and convalescent.

Two remarkable cases (Nos. 14 and 41) may be classed under Group VIII, the ataxic type. Both were young women, and both had a sudden onset which included giddiness.

One, a lady stenographer, left her office on Saturday at midday, and remembered nothing further till she recovered consciousness in bed in my ward. In the meantime she had gone to the Everton football match, paid her entrance money, taken her place on the stand, and, whilst sitting there, had fallen and been picked up unconscious and brought in an ambulance to the hospital. On admission there was no evidence of injury, and it was possible to rouse her to answer questions in a slow monotonous voice. Her face was expressionless, her limbs were a little stiff with some twitching, but no real paralysis. Nystagmus and ptosis were present. She ultimately recovered and returned to her duties.

The other patient, whilst working in a garden, became dizzy, had headache, squint, diplopia, and nystagmus. Later she became an in-patient and it was found that she had definite ataxia when standing with her eyes shut, and also ataxia in her arms. The other symptoms were those of Type I. (Dr. Blair's patient.)

Seven instances of Group IX have been met with, in which the symptoms have been slight and abortive. These patients were walking about, and all complained of headache, lethargy, and showed signs of nystagmus. Five of them had the Parkinson face. A few weeks' rest and treatment completed their recovery, though signs of nystagmus remained for a little time afterwards. One patient had troublesome hiccup of two weeks' duration, and thus should be classed in Group X.

The Parkinson syndrome, so characteristic and seen in nearly all of these cases of encephalitis, may be described as the typical expressionless face, the stiff expressionless gait, in which the patient moves with short steps, arms motionless by his side, head fixed straight to the front and not moving. The voice is frequently expressionless and monotonous. Athetosis was only seen in a small proportion of cases.

Delirium was present in a marked degree in 24 of the patients and was of an occupational character. For instance, a small girl, aged 15, the eldest of a large family, rolled up a towel and rocked it in her arms as though

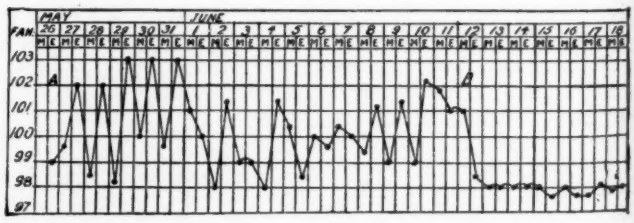

CHART 2—*Case 48.*—Patient very depressed; Parkinson syndrome, nystagmus, and great sleepiness; improved on administration of sodium salicylate gr. x every three hours. Temperature dropped at B when dose was doubled, and symptoms correspondingly improved.

"nursing a baby," A joiner, also a local preacher, "held forth in prayer"; a publican fond of Llangollen was seen making the signs of traffic control, and stated that he imagined "he was in the middle of the main street of Llangollen controlling all the transport of the country, which had become congested there, and which the local police were unable to control." His wife told us that he was an ex-police sergeant, an expert on point duty. Thus, the delirium is connected with the patient's habitual or

favourite occupation, and is usually remembered by him when roused up.

One man, however, though witty and sensible when roused out of his delirium, became so violent, although the other symptoms were improving, that he had to be sent to Mill Road Infirmary, and thence to Rainhill Asylum. On his return, perfectly recovered, he did not remember a single incident of the whole of his illness after the severe occipital pain and dizziness with which it commenced.

It is remarkable how readily a patient can be roused from his delirium and remain sensible whilst spoken to. In this way it is not unlike the delirium of delirium tremens. I would suggest that delirium tremens is an encephalitis due to the toxic effect of alcohol.

Nystagmus, well or slightly marked, was found in about 90 per cent. of the cases. It was noted in many instances that the eyeball followed the finger sluggishly, and frequently returned to the centre where it was at rest. Thus a sort of nystagmoid movement was made by the patient in his effort to follow the test.

Temperature is usually found early in the severe type of case, but does not generally extend more than a week or ten days, and is not as a rule above 100° or 101°. A few instances of a more severe or prolonged fever have occurred. It is noteworthy how many—over 50 per cent.—of the patients have shown no fever; but in several, whether a temperature was present or not, the pulse rate was considerably quickened.

Four patients had marked deafness during part of their illness, two being almost totally deaf, one of whom (Case 49, aged 34) was transferred to my care by Dr. Courtenay Yorke at the Stanley Hospital. She had marked lethargy, slight nystagmus with lagging of the eyeball, and some internal strabismus. The Parkinson syndrome was present, with sleeplessness and tremor of the right hand. She has steadily though slowly improved under three months' treatment, and all the symptoms have passed away except considerable deafness. Persistent deafness of this kind is rare. In the other patients the deafness was only of short duration.

The complications which occurred were not numerous: septic sores of an intractable form were found on the fingers of one patient, sloughing bedsores in another. Herpes was noted three times, and pressure erythema twice. Nephritis was a complication in one case. Recrudescence of symptoms occurred or recurred in several patients. The symptoms were observed to become milder in each recurring attack.

TREATMENT.

The treatment I have found most effective is sodium salicylate 15 to 30 grains every three or four hours. In those cases where there are symptoms of insomnia and restlessness I usually add 5 to 10 grains of bromide and iodide of potassium. Influenza and acute rheumatism respond so well to salicylates that I was encouraged to hope that it would have a similar effect in encephalitis. Moreover, I treat my cases of Sydenham's chorea with this drug, with satisfactory results. Therefore, in the chorea of encephalitis, which is due to the same lesion but another virus, I felt the same drug might have the same good effect. I think the results have been satisfactory, and though signs of change of character and change of affection are noted in the convalescence of a few patients, I believe that the many disabilities and after-effects of this disease will be overcome with a persistence of treatment followed by a return to former environment and former mode of life.

As already stated, in those cases accompanied by meningeal symptoms, lumbar puncture has been performed with considerable benefit. I however look forward to the day when an antitoxic serum or some powerful vaccine will be produced from the specific organism itself.

RESULTS.

It is almost impossible within so short a time of the 62 patients' illness to give a strict account of their recovery. At present they can be classified as follows:

4 deaths—1 two days after admission, with coma; 1 seven days after admission, with coma; 1 seven days after admission, with toxaemia, sloughing bedsores, and septic ulcers in the mouth, after lying in bed in lodgings neglected for two weeks; 1 after five days' illness, with coma.
1 has neurasthenia of sixteen months' duration.
2 show change of affection: "affectionate father intolerant to children"; "wife's loss of affection for husband." Both of these patients are gradually regaining their normal states.
2 remain somewhat lethargic and inclined to loaf about instead of getting to work.
4 have altered character: 2 are not so active as formerly; 1 is inclined to be rude and cheeky; 1 is irritable instead of calm and placid, but is improving.
1 has altered handwriting—small and cramped instead of large and bold.
1 still remains deaf; otherwise she has recovered.
10 are under treatment, all improving—one a recrudescence of a former attack twelve months ago.
3 are chronic cases, all showing improvement: one change of character returning to normal, another showing some Parkinsonian syndrome but otherwise recovered, and a third still showing the Parkinsonian syndrome, though much less pronounced, and with less rigidity.
4 have recovered—any change not known.
30 recovery complete, including 7 abortive cases.

The duration of the illness was, with a few exceptions, two to four months.

This result, though good, shows a marked tendency for some physical defect of nervous origin to occur as a result of this disease, and, what is more serious, change of affection or character. These changes may be temporary or permanent. At present I am unable to say how many of the 24 people who have one or other of these disabilities will have a permanent alteration in character or affection. Nevertheless, I feel it is most important that the medical officers in charge of these patients should encourage them when the illness is over, and, after a prolonged change of air, to get back to their former work. The neurasthenic young lady would, I am confident, be leading a healthy normal life, attending dances and cinemas, if it were not for her devoted mother, who will not tolerate a strict nurse or carry out strict discipline. The same applies to one of the lethargic men, who will not return to work. His wife and daughter do not encourage him to get back.

I am of opinion that some of the mental changes which are considered as sequelae are due to a too lenient treatment in convalescence. For example, the alleged kleptomania in a post-encephalitic boy, who, to demonstrate his complaint when being taken before the magistrate for stealing, lifted a lamp off a police ambulance, shows rather that the lad was an expert in legal defence than a mental deficient.

It is noted that some patients for months have worn the expressionless face and walked with the stiff expressionless gait, but gradually their expressions have become natural, and they have themselves become alert. One patient who left hospital with the Parkinsonian syndrome well marked returned to the out-patients' department a few weeks later cheerful and smiling.

DIAGNOSIS.

In spite of the number of clinical forms met with in epidemic encephalitis there is a marked tendency to the repetition of certain characteristic types, and one type usually predominates during any particular epidemic. Thus, in 1919 and 1920 the somnolent-ophthalmic and amyostatic prevailed, and in 1923 the hyperkinetic. These types are the most common.

The occurrence in a patient of one or more of the following symptoms should make one think of the possible existence of the disease[5]: (1) pathological drowsiness (lethargy), (2) cerebral nerve paralysis (especially ophthalmoplegia), (3) an acutely developing Parkinsonian syndrome, (4) a cataleptic state, (5) a myoclonia, (6) a chorea, (7) pupillary disturbances, (8) violent neuralgia, (9) a poliomyelitic syndrome, (10) a peculiar delirium, (11) a psychotic state, or (12) signs of meningeal irritation in times when encephalitis is epidemic.

The differential diagnosis in these cases has been: apoplexy 2, haemorrhage in pons in 1, meningitis in 5, progressive bulbar paralysis in 1, chorea gravis in 1, delirium tremens in 3, myasthenia gravis in 2, catalepsy or epidemic stupor in 3, neurasthenia and paralysis agitans in several. The most difficult to diagnose was the case which simulated bulbar paralysis; the absence of atrophy of the tongue, together with the improvement of dysphagia and the paresis of the facial muscles, confirmed the diagnosis of encephalitis lethargica.

PROGNOSIS.

It seems almost impossible to give any data on which to form a sound prognosis. My impression has been that the hyperkinetic is more virulent in type, and more difficult to treat, than the somnolent-ophthalmic or amyostatic type. I have seen several deeply cataleptic cases recover. On the other hand, the severe paralytic type, which simulates cerebral haemorrhage, is probably the most serious of all.

The prognosis is always grave, as noted by Farquhar Buzzard[8] and others. My percentage of complete recoveries up to date is only 50. I would, however, strike a sanguine note, always admitting that virulent types and virulent cases do occur. One patient with mania of a most violent and acute type completely recovered in all respects, and a lad with change of character for twelve months has become normal. The Parkinsonian facies has already disappeared in over 50 per cent. of these cases.

I fear that there are many conclusions in this paper left as it were "in the air." I must plead that the disease "though old is new," and therefore it is premature to form other than hypothetical conclusions in many important details.

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THREE SIMULTANEOUS EMPYEMATA FOLLOWING PNEUMONIA.

BY

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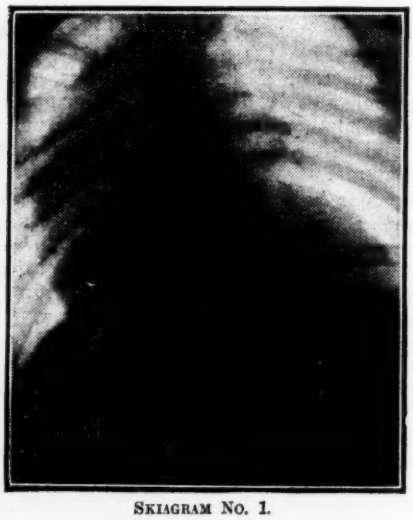
ON January 3rd P. S., aged 29, a bus driver, developed severe pneumonia, which, when I saw him on January 11th, had caused complete consolidation of the whole of the right lung and of the left lower lobe. The temperature became normal on January 12th, and so remained until January 21st, when it rose to 100°; three days later his medical attendant, Dr. Hubert Cox, reported that he had developed signs of empyema on both sides.

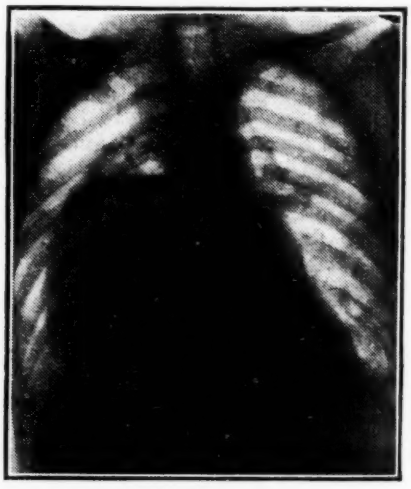
The patient was admitted to Queen's Hospital, Birmingham, on the morning of January 25th. He was cyanosed,



SKIAGRAM NO. 1.

breathed rapidly and with great difficulty, and was extremely ill; the temperature was normal. He had signs of a large empyema at the left base, another over the front of the right lung, and a third at the right base. The axillary region was resonant.

Mr. Gemmill saw the patient with me and decided to operate immediately on the largest collection—namely, the left empyema—which was drained after resection of a rib; 50 ounces of thick greenish pus was removed; microscopically and by culture the pus showed pneumococcus and pneumobacillus, and from it a vaccine was made and administered



SKIAGRAM NO. 2.

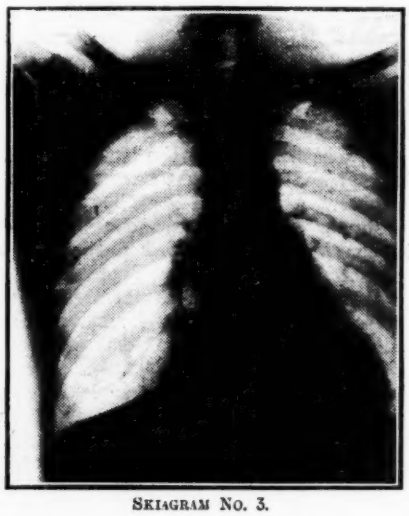
subsequently at intervals of a few days. On January 31st the empyema at the right base was aspirated and 27 ounces of pus withdrawn.

On February 7th skiagram No. 1 was taken; it shows the tube in the left chest, the round shadow of the empyema over the front of the right lung, and the denser shadow of the collection at the right base.

On February 10th the anterior collection was aspirated, but only 7 ounces of pus obtained. Skiagram No. 2, taken on February 13th, shows how much pus remained unaspirated. By February 16th the patient's general condition had so much improved and the expansion of the left lung was so satisfactory that we decided to drain the remainder of the right basal collection, and after resection of a rib Mr. Gemmill completely evacuated it.

A few hours after the patient had returned from the operating theatre a discharge of 26 ounces of pus suddenly occurred through the tube. The anterior empyema had evacuated itself.

Thereafter the patient's progress was rapid: both lungs expanded well, the tubes were removed, and no abnormal physical signs remained. Skiagram No. 3, taken on March



SKIAGRAM NO. 3.

24th, two months after admission, shows no abnormality. The patient left the hospital looking fat and well, feeling better, he said, than he had ever felt in his life.

The result was very satisfactory; whether we went the right way to get it is quite another question.

INSULIN TREATMENT OF DIABETES IN PHTHISIS.

BY

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CONTINENTAL and American opinions on insulin treatment of diabetes in phthisis have been conflicting. The following cases are therefore of interest. The prognosis of progressive or ulcerative phthisis with diabetes mellitus is always very grave. Leyton recorded 5 cases, of whom 4 died without responding to controlled dietetic treatment. In two cases treated with ladder diet in a sanatorium in 1918 the urine was never freed of sugar or acetone; one died of coma and the other of extreme wasting. The cases since treated with insulin are briefly as follows.

CASE I.—A girl, aged 14, with active pulmonary tuberculosis, first diagnosed in 1922. When first seen she weighed 4 st. 10 lb., and had in the urine 9 per cent. sugar with diacetic acid and acetone. Polyuria and wasting continued with ketosis on Graham's diet. *X* rays showed consolidation of the left upper lobe, and enlargement of the peribronchial glands with fibrosis. Early in 1923 her condition was so much worse that one felt certain that to her the advent of insulin was a real boon. In May, 1923, the fasting blood sugar was 0.18. Insulin injections were started on July 9th, at first 5 to 10 units thrice weekly. Soon the necessity for more frequent injections was recognized and financial help for the cost of the remedy obtained. In August, 1923, the urine contained 2.8 per cent. sugar; on August 24th, with two doses of 60 and 30 units of insulin, she was sugar-free for the first time. About this period she could not tolerate 5 grams of greens, and 70 to 80 units were necessary to maintain the urine sugar-free. I was able slowly to increase the carbohydrate tolerance, and by October she had a diet of 400 calories with 10 grams of carbohydrate. Her weight was now over 5 st. The blood-sugar estimate was 0.074, though previously it was as high as 0.320. In April, 1923, the lenses were swollen and cataractous, and in October Mr. Whitehead of the Leeds General Infirmary found considerable opacity in both the lenses. Her sight has now considerably improved. The physical signs of the chest are quite quiescent and her general health is very satisfactory. Early during 1924 she had fifteen or sixteen injections monthly of 10 or 20 units and a diet of 700 calories containing 16 grams of carbohydrate. With any excess of blood sugar the dose was increased. Since April, 1924, her diet consisted of 4 oz. milk, 2 oz. fish, 4 oz. meat, 4 oz. greens, 2 eggs, 3/4 oz. olive oil, 2 oz. bacon, 1/2 oz. bread, 3/4 oz. butter, and beef-tea—total calories 911, proteins being 61½ grams, carbohydrates 19 grams, fats 65½ grams. At present only once or twice a week she gets about 5 units of insulin.

CASE II.—Male, aged 31, height 5 ft. 2½ in., weight 9 st. 5½ lb. before treatment, having previously lost a stone in weight. Tuberculosis of lung was suspected by his own doctor whilst the patient was undergoing dietetic treatment for diabetes. On examination there was clinical evidence of early infiltration; this was confirmed by *x* rays. He had 2 per cent. sugar in the urine with acetone and diacetic acid. The blood-sugar estimation in September, 1923, was 0.258. Diet failing, 20 to 30 units of insulin were injected twice daily. The dosage had to be doubled before the urine became sugar-free with a carbohydrate tolerance of 5 grams. Two weeks after the patient only needed 5 units two or three times weekly, and remained sugar-free on a carbohydrate diet of 20 grams with proteins and fats to make up 1,250 calories. The blood sugar varied about this period from 0.122 to 0.14. Later he needed only fortnightly injections, and was able to resume work early in 1924; he continues to maintain his health. For over six months he has received no injections. He is 10 st. in weight and his lung condition is quite quiescent. He has been on a diet of over 1,360 calories: cream 2 oz., greens 12 oz., 2 eggs, fish 4 oz., meat 4 oz., bacon 2 oz., bread 1 oz., olive oil 1 oz., butter 3/4 oz., and beef-tea.

CASE III.—Male, with incipient pulmonary tuberculosis; he had 1 per cent. sugar in the urine in October, 1923, with blood sugar 0.262. On controlled diet he remained sugar-free for a time, but he began to lose weight. Insulin was therefore given through the National Health Insurance scheme. With 5 or 10 units two or three times weekly he was able to have a diet of 1,200 calories with 30 grams of carbohydrate. His chest condition is now quiescent and he does not need insulin at present.

CASE IV.—Male, suffering from chronic phthisis, with diabetic history of over a year when first seen. In October, 1923, the urine contained 3½ per cent. sugar with acetone and diacetic acid; blood sugar 0.624. He was subject to neuritis. The Wassermann reaction was negative. Injections of insulin twice daily of as high a dose as 70 to 80 units failed to free the urine from sugar with practically starvation diet. He admitted he felt better with the injections. He did not continue the treatment owing to the expense and apparent failure to become sugar-free, except on one occasion. He is one of the cases with a long-standing history of diabetes in phthisis in which insulin may not effect a cure.

CASE V.—The patient in this case was a myxoedematous type of woman with chronic pulmonary tuberculosis and blood sugar 0.624. She had kept her general health on controlled diet without insulin for a year.

CASE VI.—Another patient with primary phthisis, with later diabetic onset, has also kept sugar-free for a year on controlled diet.

These cases leave no doubt that insulin has a part to play in diabetic phthisis, especially when a satisfactory diet is necessary to maintain resistance. Failure may occur with long-standing diabetes. In others diet alone may suffice for a time, and insulin may be tried if diet fails.

TREATMENT OF EFFUSIONS IN ARTIFICIAL PNEUMOTHORAX.

BY

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EFFUSIONS in artificial pneumothorax may be grouped under three headings: (1) simple, (2) serous, and (3) purulent.

Simple Effusion.

Simple effusion into the pleura, without fever or pain, occurs in at least 50 per cent. of the cases. It is often to be recognized by *x*-ray examination only, and generally gives rise to no unpleasant signs or symptoms. The patient sometimes discovers it himself, on hearing a splashing noise when he moves.

Serous Effusion.

Serous effusion (serous pleurisy) is a frequent complication of artificial pneumothorax, and occurs in a large number of cases. It begins with pain in the side, and fever, the temperature perhaps rising to 103° or so, and the fluid gradually accumulating. In uncomplicated cases the fever generally lasts three or four weeks, falling gradually to normal, often being reabsorbed without the need for any interference. It should not be aspirated or interfered with if this can be avoided. If, however, it becomes very large and is causing discomfort, and is not being absorbed after a long period, it may sometimes be made to disappear by sweating. The patient is sweated for one hour thrice a week by means of aspirin, hot-water bottles, and so on. Should this fail, then it would be necessary to aspirate and replace the fluid with air. In any case, whether the fluid is absorbed naturally or removed, replacement should always be performed in order to prevent re-expansion of the lung and formation of adhesions which would render the continuance of a satisfactory pneumothorax impossible. It cannot be too strongly emphasized that repeated *x*-ray observation is necessary.

Purulent Effusions.

Purulent effusions may be divided into three classes.

(*a*) Those due to infection with the tubercle bacilli alone—in other words, a cold abscess of the pleura—are most frequently seen in cases of severe infection; they are ushered in with pain in the side and fever, which may last some weeks. The fluid is at first clear and serous-looking; it gradually becomes more turbid, and finally develops into thick pus. After some time the temperature comes down and the patient feels, and is, in good general health. It is better not to aspirate too soon, but to wait until all active symptoms have abated. The fluid should then be drawn off in small quantities at a time, at intervals of, say, a week, and replaced with air until the chest is emptied. The effusion will probably reaccumulate, and the procedure will have to be repeated perhaps many times, but in some cases it will eventually cease to reappear.

I have at present under observation three cases of cold abscess of the pleura which have been aspirated from time to time and in which the patients have remained in excellent health, and apparently are fit and strong. This fluid in each case has now become so thick that it is impossible to get it out even with the largest-sized needle. In two of the cases it extends up to the third rib, and in one case the chest is quite full. Curiously enough, these three patients are all women of about the same age (30). I am not

interfering, in the hope that the material will organize and be converted eventually into fibrous tissue, thus causing an obliteration of the lung on that side. These three patients are all in very good general health, without cough, sputum, or fever.

(*b*) With purulent effusions containing tubercle bacilli and certain organisms of mixed infection the same procedure is indicated—namely, aspiration and replacement by air—and often the whole process dies down and becomes passive. I have sometimes found it very useful, instead of replacing by air, to replace by oil of gomenol (10 per cent.), which seems to act as a lubricant of the pleural cavity and prevent reaccumulation of the pus. In these cases, if the mixed secondary infection is not too virulent, the whole process may eventually settle down and not give rise to severe septic poisoning.

(*c*) In this class may be put those cases of acute massive secondary infection of the pleural cavity, with high fever of a septic type, shivering, sweats, rapid emaciation, and all the signs of acute septic poisoning. I have had two instances of this in the last few years.

One, in a young man of 21, was due to a perforation of the lung into what was previously a successful artificial pneumothorax cavity, which rapidly became infected. Aspiration and washing out were resorted to frequently, with no effect, and finally a rib was resected and the cavity drained. An attempt was made later to close the suppurating cavity by a plastic operation, but the patient ultimately died of an acute spread of tuberculosis in the opposite lung.

The other case was a woman aged 25. A successful pneumothorax had been done on the right side for a severe acute spreading disease in the right lung. She kept quite well, except for a serous effusion, for eighteen months, but one day her temperature suddenly rose to 104°, and the fluid rapidly became purulent. It was found to contain a pure culture of pneumococcus and no other organism. The same process was resorted to as in the last case—that is to say, aspiration, washing out, and finally drainage, and a thoracoplasty—but without effect, the patient dying a day or two after the final operation.

Conclusions.

Regarding the treatment of fluid, I have come to the following broad conclusions.

When dealing with a serous effusion or a serous pleurisy, do not aspirate if it can possibly be avoided. The fluid will often reabsorb by itself, or may be aided by sweating the patient. If, however, it is a very big effusion, or is causing inconvenience and discomfort, or is not showing signs of disappearing after some weeks, then it should be aspirated and replaced with air, but it is a bad thing to irritate the pleura unnecessarily by needling. A simple serous effusion may easily be turned into a purulent one by frequent aspiration. At each aspiration the fluid is seen to get more and more turbid and finally to become pus. Another important maxim is not to interfere needlessly with an acute effusion—that is to say, while the temperature remains high; it is better to wait to see if the fever will come down, as it generally does except in infective cases, and to deal if necessary with the condition when it has become passive.

When removing effusions, if there is any suspicion of the lung underneath being infected with tuberculosis, always replace with air, thereby establishing a pneumothorax. Whether the fluid is absorbed or removed, careful watch should be kept by *x*-ray examinations and air put in as the liquid disappears, to avoid the re-expansion of the lung and the formation of adhesions which would render the continuance of the pneumothorax an impossibility.

When dealing with purulent effusions, aspirate and replace with air when necessary. Avoid washing out if possible; it is merely irritating to the pleura and has, I believe, no beneficial effect. I have seen good results obtained by replacing in these cases with oil of gomenol (10 per cent.) instead of with air. In acute infected cases, such as the two described above, there is really nothing to be done except to drain the pleura, after attempts at aspiration and washing out, etc., have failed, and then, if possible, to continue with a plastic operation at a later date. I have seen one or two recoveries in these cases, but they are always very serious and very often fatal.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL

COMPLICATIONS OF LUMBAR PUNCTURE:

OPISTHOTONOS: OEDEMA OF SUBCUTANEOUS TISSUES.

IN a series of 200 lumbar punctures, headache and pains running down the back of the legs were the commonest complications. The two following rarer sequelae which occurred in the series are worthy of notice because of the apprehension they aroused.

Opisthotonos.

Case 1.—D. V., a boy aged 9, with septic sores on his hands and feet, was admitted to hospital as a doubtful case of encephalitis. (This diagnosis was not verified.) A few hours after puncture he complained of intense headache, and within twenty-four hours his body was arched backwards almost to a semicircle and Kernig's sign was very definite. The boy was crying out with pain. There was, however, no rise of temperature or acceleration of the pulse rate. Within twelve hours the rigidity was passing off and the patient was free from symptoms on the fourth day.

Case 2.—C. I., a girl aged 7 years, was suffering from early tuberculous peritonitis. On account of drowsiness and headache she had been admitted to hospital as a case of encephalitis. Within twelve hours after lumbar puncture she developed marked nuchal rigidity, the legs stiffened, and the back was considerably arched. Her temperature rose to 99.5° F. and the pulse rate to 120. These symptoms were at their maximum in about twenty hours and had disappeared by the third day.

In these cases the opisthotonos occasioned the thought, "Have I introduced septic material and set up a meningitis?" As it happened the opisthotonos was an extreme manifestation of meningism, but the anxiety felt at the time was considerable.

Oedema of the Subcutaneous Tissues.

Levinson in his book on the cerebro-spinal fluid mentions this complication as not uncommon after repeated punctures. The case described is of interest because it occurred after the first puncture and the nature of the oedema was not at first apparent.

Case 3.—W. P., aged 2 years, had a history of drowsiness, vomiting, and diarrhoea, and was admitted to hospital certified encephalitis. (This diagnosis was afterwards altered to gastro-enteritis.) The day following lumbar puncture a fluctuant swelling, the size of half an orange and with a fairly well defined margin, was noticed between the scapulae. There was no obvious oedema at the site of puncture. The child had no constitutional symptoms. A needle was inserted, with negative result. On the second day after puncture an oedematous area extended down the back and joined the swelling between the scapulae to another similar but smaller swelling over the site of puncture. Only then was it recognized that the oedema was due to a considerable leakage of cerebro-spinal fluid. The swelling subsided in four days and the child did not appear to suffer any ill effects.

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ACUTE CALCULOUS CHOLECYSTITIS IN A GIRL OF FIFTEEN.

I WOULD like to add the following to the interesting series of cases of gall stones in young subjects recently appearing in the JOURNAL.

I. C., aged 15 years, was seen with Dr. Hendrie Kirk on May 20th, 1920, with acute abdominal condition of four days' duration. Illness began with pyrexia, pain in the back, and sickness. On the third day there was considerable vomiting, and on the fourth day rigidity was noticed in the upper part of the right rectus, and persisted even after an opiate had been given. Tenderness was present, the maximum being at or just above McBurney's point. The case was thought to be one of acute appendicitis, and she was admitted to the Western Infirmary for operation.

An incision made through the right rectus just below the level of the umbilicus exposed a swollen and inflamed rounded mass below the edge of the liver, and glued to the surrounding viscera by recent fibrinous exudate. Dark green bile was drawn off by hypodermic syringe. The mass was then incised, and proved to be an acutely inflamed gall bladder containing twenty-six calculi and a quantity of debris and mucus. The calculi were pale, soft, and friable, spherical in outline, and of average diameter of 5-7 mm. They possessed a raspberry-like surface, and each seemed to be formed of a conglomeration of smaller spheres. The wall of the gall bladder was nearly a quarter of an inch thick, and the mucous membrane was

oedematous and velvety. Drainage was employed and recovery was uneventful. The bile which had been aspirated failed to show organisms in film or culture.

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HEREDITARY JAUNDICE.

HEREDITARY icterus is a condition which has long been recognized by the profession, but I cannot find a reference to a case where the sex of the child appears to play a part. The following case shows a striking susceptibility on the part of the female children, while the boys were more or less unaffected.

The mother, aged 41, has been subject to "fits"—presumably fainting fits—more or less all her life, but especially while she was pregnant. Her father died at a comparatively early age of tuberculosis. Her mother also "took fits." She (the patient) had several sisters who died in infancy from jaundice and convulsions.

The patient's own family has been as follows (the mother's age at the birth of each child is given in parentheses):

1. Boy; healthy. (18 years.)
2. Boy; tuberculous. Has had one or two fits. (24 years.)
3. Boy; healthy. (27 years.)
4. Boy; healthy. (30 years.)
5. Miscarriage at three months.
6. Girl; died when 29 hours old—jaundice and convulsions. (33 years.)
7 and 8. Twin girls. One died when 3 days old, the other when 7 days old; both had jaundice and convulsions. (34½ years.)
9. Boy (premature—8 months); healthy. (36 years.)
10. Girl; died when 7 days old—jaundice and convulsions. (41 years.)

Glaister recorded in 1879 (*Lancet*, March) a case in which a woman had 8 children, 6 of whom died of jaundice shortly after birth, but the above sex preference does not appear to have shown itself. The cause of the condition is rather obscure, no particular changes being found in liver or bile ducts, but it would be interesting to know if others have observed this curious selection of female children.

The strong tuberculous taint may play an important part; but, as I was unable to make a *post-mortem* examination in the case which I saw recently, I could not determine the state of the liver and bile passages.

Leadgate, co. Durham. W. MURRAY TAYLOR.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

OXFORD DIVISION.

A MEETING of the Oxford Division was held at the Radcliffe Infirmary on May 27th; in the absence of the President (Dr. Neill) Mr. R. H. A. WHITELOCKE was in the chair.

Vesical Calculus.

Mr. W. W. WAGSTAFFE read notes of a patient, aged 69, from whose bladder he had removed a mulberry type of calculus weighing 6 ounces.

This patient was admitted to hospital on April 29th, with a history of acute retention; he had had difficulty and frequency of micturition for five years, but had never been catheterized, and apart from the difficulty of micturition had had no pain. His mental condition was not very clear, so that it was not possible to get a very good history from him. His bladder was found to be acutely distended, and 32 ounces of urine was withdrawn by a gum elastic catheter, which passed quite easily. The rectal examination showed an enlarged prostate and a hard nobbly mass in connexion with it. The blood urea was 220 mg. per 100 c.cm. On May 1st the bladder was opened and a large stone of the mulberry type was removed, which weighed 6 ounces. The prostate showed some enlargement of the middle lobe; as a whole it was fairly soft. The bladder was drained. Since the operation the patient improved at first, but gradually lost ground, sank, and died three and a half weeks after admission; no necropsy was permitted. The terminal condition was one of suppression of urine.

It was very exceptional to find such a large mulberry stone with no phosphatic concretions on it. The hard, nobbly mass felt by the rectum was undoubtedly the stone lying in the base of the bladder, but, since the prostate was also enlarged, it was difficult to dissociate the two conditions, and the existence of the stone was not suspected before the operation. The history was entirely suggestive of prostatic enlargement and not of vesical calculus. Another point of interest was the high blood urea, which gave a very good indication of the severity of the clinical condition, being correlated with anorexia, dry tongue, and, frequently, a confused mental condition. The blood urea test was very valuable as regards the suitability for operation of all urinary cases.

Typhlitis.

Mr. Wagstaffe then gave an account of a patient who was found at an operation to be suffering from the rare condition of typhlitis.

A man, aged 50, was admitted to hospital with a history of vomiting and twenty-four hours' acute pain in the right iliac fossa. For one week previously he had had slight pain in the right iliac fossa, but had continued at work. On examination he showed an indefinite mass in the right iliac fossa, but was rather tender in both right and left iliac fossae; there was some resistance in the right iliac fossa but no tenderness in the loin. His temperature was 100° and pulse 100. The diagnosis made was appendicitis, and an operation was immediately performed. On exploring the peritoneum through a Battle incision some free fluid was seen. The appendix was found to be long but not adherent, slightly thickened, but not acutely inflamed; it was removed, but was obviously not the original condition which had caused his acute illness. On further examination the caecum was found to be acutely inflamed, especially the posterior part, and parts of it were almost gangrenous. It resembled a caecum which had been in an intussusception, except that there was no trace of inflammation on the small intestine; the caecum and the ascending colon were not sufficiently mobile for this to have been the case. The caecum was thoroughly explored; no perforation was found, and the rest of the gut was also explored; nothing else abnormal was found. The pathological report was that the appendix was the seat of chronic inflammation, while the caecum was acutely inflamed. A soft rubber drain was inserted to the posterior aspect of the caecum through the operation incision; the wound healed perfectly, but there was considerable distension and constipation, which was overcome by appropriate treatment.

Inflammation of the caecum apart from inflammation of the appendix was described in the textbooks as not occurring, and a fairly extensive search of the literature had revealed no similar case. Before the publication of Fitz's paper on appendicitis in 1886 the condition of the caecum and appendix in appendicitis was not properly understood. The importance of the appendix was not appreciated and the importance of the caecum was over-estimated; but pathological conditions had not been in the least appreciated, and there was great confusion of thought. The reason of this was that these cases were rare, and they were only investigated after death, when the condition in the peritoneum cavity was that of general acute suppuration, so that it was difficult to identify the primary cause. In 1885 Hector Mackenzie, writing in the *St. Thomas's Hospital Reports*, said: "Perforation of the vermiform appendix is a disease rare in its occurrence, obscure in its symptoms . . . and from this rarity and obscurity it is not always that a physician recognizes it and is able to differentiate it from other diseases." A search through the records of St. Thomas's Hospital showed that the first case of appendicitis recognized in the hospital was reported in 1889. It was not true, probably, that the diagnosis was missed in a large number of cases, because the records did not show a large number of patients dying from acute peritonitis or abdominal abscess. One or two a year only were found, and it was very striking, when comparing the results for, say, 1889 with those of the last year published, 1922, that there were actually 215 cases of acute appendicitis operated on at St. Thomas's. Secondly, the first account found by Mr. Wagstaffe of this condition of inflammation of the right iliac fossa was in Dupuytren's *Leçons Orales* (date 1833). Dupuytren gave a long account of abscess in the right iliac fossa, but this was not very helpful, since he built up a very fine theory on extremely loose observation. The theory which held ground for a long time was that the caecum was the site of origin of all these abscesses in the right iliac fossa. It was not until the work of Fitz, in 1886, which gave a rational and clear account of appendicitis, that this caecal theory was finally overthrown. But such a case as this showed that there was after all something in the caecal theory.

Gall-bladder Surgery.

Mr. DODDS-PARKER read a paper on some aspects of gall-bladder surgery, in which he advocated cholecystectomy rather than cholecystotomy for gall stones. The advantages of the former were: (1) that it removed the site of

gall-stone formation; (2) that it removed the focus of infection, which was otherwise liable to persist; (3) that it prevented many cases of biliary fistula; and (4) that it eliminated the risk of the subsequent development of cancer. Since 1907 Mr. Dodds-Parker had removed the gall bladder in 90 cases with only 3 deaths. One of these was from septic pneumonia, another from multiple abscess of liver, and the third from delirium tremens. He performed cholecystectomy in cases of acute septic gall bladder with gall stones and in chronic inflammation with gall stones, where the gall bladder might be either enlarged or small and contracted, with many adhesions, which offered considerable difficulties at times. In addition to the complications which arose from adhesions, the presence of jaundice added to the gravity of the case, since then the general condition of the patient was usually worse. Mr. Dodds-Parker described three cases of gall stones he had met with in undergraduates. Mr. R. H. A. WHITELOCKE described two cases in which he had performed cholecystendysis with a satisfactory sequel in each. Dr. COLLIER related a case in which typhoid bacilli had been found in the excreted contents of the gall bladder (duodenal tube) as well as in the gall stones which were subsequently removed. The attack of enteric fever had occurred twenty-five years previously. It was probable that the case would be recorded more fully at a later date.

ULSTER BRANCH.

THE annual meeting of the Ulster Branch was held in the King Edward Hall of the Royal Victoria Hospital, Belfast; the professional part consisted in the exhibition of rare and interesting cases, pathological and bacteriological specimens, instruments, and photographs.

Dr. MORROW showed a case of muscular dystrophy, and, as a contrast, one of amyotrophic lateral sclerosis; Dr. T. HOUSTON, some experiments with leucocytes; Professor THOMSON, a chondroma of the brain; Dr. BOYD CAMPBELL, slides and specimens from a case of myeloblastic anaemia; Mr. MITCHELL, a case of pressure paraplegia treated by Albee's spinal graft.

Professor FULLERTON showed unusual varieties of club-foot, polypoid projection in the posterior urethra, plating of refractured femur, chondroma of the hand, malignant growth of the bladder treated by diathermy, also radiograms illustrating pyelography and cystography. Mr. HOWARD STEVENSON showed medullary carcinoma of breast, and, with Dr. RANKIN, some cases of carcinoma of the tongue and soft palate treated by fulguration.

Dr. J. A. SMYTH showed six cases of diabetes under insulin treatment. One of these, a male, aged 34, had a duodenal stenosis, and the carbohydrate tolerance improved greatly after successful operation; no insulin had now been administered for three years. Another received 500 units of insulin daily during an attack of pneumonia in which she had excessive acidosis; a dose every four hours was given. Professor WILSON demonstrated a new method of counting the red cells, which did away with the use of a haemocytometer.

Mr. S. T. IRWIN and Mr. R. J. MCCONNELL showed a series of club-feet treated by adhesive plaster; three cases of slipped epiphysis of femur; a series of radiograms of duodenal and gastric ulcers; a case of arthrodesis of shoulder-joint for flail-joint due to infantile paralysis; a case of ramisection for spastic diplegia; and a stereoscopic radiogram of a rare fracture of the acetabulum.

Mr. P. T. CRYMBLE showed a case of resection of two-thirds of stomach for hour-glass contraction due to ulcer, together with a specimen and radiogram. He exhibited also the instruments for reduction and fixation of a fracture by steel ribbons and plate, with illustrative radiograms. Mr. H. P. HALL'S exhibits referred to plating for spiral fracture of femur, plastic repair of hypospadias, perforated duodenal ulcer, compound depressed fracture of skull, and reconstruction of the nose following rodent ulcer.

Mr. H. P. MALCOLM showed seven very successful end-results of the treatment of hip-joint disease from the open-air home at Greymount, a case of chronic abscess of the frontal bone, a case of lymphangioma of the submaxillary region, from which clear serum could be drawn off which clotted at once.

Professor MCILWAINE showed a case of infantilism in a boy, aged 17 years, with enlarged spleen and hydrothorax, which had undergone repeated aspiration; the Wassermann test was positive, and under antisyphilitic treatment the patient had grown two inches, and increased from 4 st. 11 lb. in weight to 6 st. 1 lb.

Reports of Societies.

MALIGNANT DISEASE OF THE PHARYNX AND LARYNX.

THE summer meeting of the Section of Laryngology of the Royal Society of Medicine was held on June 5th, with the President, Dr. A. LOGAN TURNER, in the chair. Before the proceedings began the President welcomed a number of distinguished guests, including Dr. Tapia of Madrid, Professor Burger of Amsterdam, Dr. Charles Mayo of Rochester, Minnesota, and Dr. Graham Brown of Brisbane.

Big Pharyngostomes as an Accident in Laryngectomy.

Dr. TAPIA read a paper, in French, on the big pharyngostomes as an accident in laryngectomy. He had performed 151 laryngectomies, with a post-operative mortality of about 5 per cent. It was impossible to leave a patient with the mutilation that radical removal of malignant tumours from the region of the pharynx and larynx demanded. Dr. Tapia showed how large pharyngostomes could be avoided. Pre-operative preparation of the mouth and nose, with a view to avoiding sepsis, was most important; septic teeth and septic tonsils, if present, should be removed some time before the operation. He described his method of closing pharyngostomes when they had resulted. The object of the second operation was to make the life of the patient more worth living, to help him to speak and to swallow.

Mr. WILFRED TROTTER said that the object of plastic procedures in the treatment of malignant disease in the pharynx and larynx was not only to offer the patient a reasonable chance of maintaining his powers of speech and swallowing, but it was extremely important to leave the patient, immediately after the operation, without any extensive raw surfaces in communication with the pharynx, in which infection could occur, with the very serious dangers of cellulitis in the neck and secondary haemorrhage. For instance, with such a bugbear of surgery as post-cricoid carcinoma one could have the patient, in a reasonably favourable case, speaking and swallowing normally within six weeks of the primary operation. The surgeon must know beforehand what kind of tumour he had to deal with, and it was surprising how exact and precise one could be on that point. He asserted that one could not do good plastic work in the pharynx and larynx unless one could secure a reasonable amount of asepsis. Sepsis meant, if the patient survived, scarring; and there was nothing more upsetting to the results of plastic surgery in the pharynx than a great deal of scarring.

Mr. LIONEL COLLEDGE recounted a case which illustrated the importance of removing the teeth before operating for malignant disease of the larynx. The patient had a recurrence of cancer of the larynx, and after laryngectomy the wound broke down and septic bronchitis resulted, although some septic teeth had been removed before the operation. After removing all the remaining teeth the wound healed up.

Sir STCLAIR THOMSON said that the textbook descriptions of laryngectomy or similar operation gave the impression that the wound was stitched up and it healed like a razor cut on the face. Frequently, however, it was not so. Before the war, when less was known about plastic surgery than now, one had to wait and pack; he had sometimes seen three months occupied in closing.

Sir JAMES DUNDAS-GRANT said that he had been greatly impressed, when seeing Mr. Wilfred Trotter doing a lateral pharyngectomy, to notice that he stitched the deeper parts, and only partially stitched the superficial parts, thus leaving a space for the escape of any secretions and for packing; the result was eminently satisfactory.

The Case of Diseased Conditions of the Pharynx, Larynx, and Mouth.

Dr. CHARLES MAYO said that in thinking of infection by a particular kind of organism it was well to inquire also what was its chemical composition and its place in the

world. Warts and papillomata of the mouth, vocal cords, bladder, rectum, and other parts, if irritated and subjected to ineffectual attempts at removal, became liable to the development of malignancy. More attention should be paid to the mouth region in the somnolent form of encephalitis; in this disease there was a redness of the pharynx, and it was very likely that the mucous membrane of this region was suitable to the causal organism. He believed that in his father's day ordinary clinical observation was carried to a higher degree of perfection than in these days of elaborate laboratory and other aids. Sometimes to-day the clinical examination of a patient by a doctor omitted the examination of the tongue. There had recently been, in America, a tremendous increase in heart disease and in infections, and *post-mortem* examinations showed that much of this was due to sepsis from the teeth. The killing of tooth nerves and filling and crowning by the dentist prevented the patient from feeling the danger signal of pain when he had actually a septic focus in his mouth. In middle and later life people had troubles which were not purely due to infection, but to alteration in the blood found at those periods. He would like *x*-ray pictures to be taken of teeth and jaws, not only to see the amount of infection, but also to find out how Nature was dealing with the calcium in infected areas. There were periods of life at which they were resistant to certain infections, and then when a break came a change was seen in a person's colour and appearance; the leucocytes of such a person would probably be found to be down anything from 75 to 55 per cent. Inheritance was really a question of the degree of resistance, and a study of family history supplied an inkling of what had specially to be contended against.

Speech after Laryngectomy.

Professor BURGER read a paper on the means of restoring some measure of speech to patients whose larynx had been completely removed. He brought with him a patient on whom he had performed this operation, in order that the meeting might judge the measure of success, which was very remarkable, of the means employed. He formed a pseudo-glottis at the mouth of the oesophagus, so that during quiet respiration the mouth of the oesophagus was always wide open.

Mr. LIONEL COLLEDGE demonstrated the McKenty-Western artificial larynx, and showed two patients who were using it successfully. In many respects this artificial larynx resembled that of Dr. Tapia, except that the chamber was a little larger in his, and there was also a screen by which the tension of the membrane could be adjusted.

Dr. GRAHAM BROWN exhibited an artificial larynx, the chief advantage of which over others was that it overcame the escape of saliva which usually occurred around the opening of the artificial larynx.

Dr. TAPIA also demonstrated his well known apparatus employed for the same purpose. He said that the ideal, however, was to get the patient to speak without the aid of any apparatus.

Sir JAMES DUNDAS-GRANT showed a patient, a young woman, whose larynx he had removed two years ago, and whose articulation was so clear that she was able to do her own shopping.

Tracheotomy in Tuberculous Laryngitis.

Dr. T. RITCHIE RODGER said that the root treatment of tuberculous disease in any part of the body was to place the affected parts in a state of physiological rest, as far as possible. Records showed that the normal lung was not prejudiced by the wearing of a tracheotomy tube. He gave details of four cases in which he had carried out tracheotomy in tuberculous laryngitis.

Sir JAMES DUNDAS-GRANT thought that in the cases described tracheotomy was fully justified.

Mr. E. D. D. DAVIS said that he always tried to avoid tracheotomy in such cases, because the tracheotomy wound became very septic, and also because such patients had a good deal of coughing, which did most damage to the larynx. Sir STCLAIR THOMSON said that tracheotomy as a curative measure was seldom called for in tuberculosis. Dr. P. WATSON-WILLIAMS and Dr. DOUGLAS GUTHRIE also spoke.

Intranasal Dacryocystostomy.

Mr. J. S. FRASER read a short paper on intranasal dacryocystostomy, and described the operation in detail. No after-treatment was necessary, and the average stay in hospital was only four days. The procedure was much more effective than dilatation of the tear passages or excision of the tear sac. The paper was discussed by Mr. J. B. HORGAN, Mr. LAWSON WHALE, Mr. A. J. M. WRIGHT, Mr. W. J. HARRISON, Mr. E. D. D. DAVIS, and Dr. GRAHAM BROWN.

The Sinus Condition in Encephalitis Lethargica.

Mr. A. LOWNDES YATES said that in the cases investigated the pneumococcus or Friedländer's bacillus was most commonly found, and in all the patients there was rhinitis and sinusitis, usually affecting the posterior group of sinuses. Mucus was absent, and the membrane seemed to have lost its function. There were comparatively few sufferers from the disease, but many carriers.

MANGANESE AND ANTIBODY PRODUCTION.

AT a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland on May 15th, the President, Professor J. T. WIGHAM, in the chair, Dr. HORGAN read a paper on the non-specific stimulation of antibodies (effect of manganese on agglutinins), and showed lantern slides.

Dr. Horgan stated that each of a number of rabbits had been given one dose of typhoid vaccine intravenously, and subsequently intravenous injections of manganese chloride after various intervals of time. It was found that manganese did not prevent the normal fall from the primary peak of the agglutination titre. In three out of six animals the metal caused a rise in titre. The animals which were positive all showed well marked primary peaks, a fact which might suggest a relation between the power of the animal to produce antibodies and the powers of response to the stimulation of manganese.

Professor J. W. BIGGER said that the definite opinion of the Danish school was that manganese increased the antibody content. Experiments in England indicated that manganese did not increase the antibody content; Dr. Horgan had obtained partial positive results. This difference in the results obtained was probably due to the difference in the rabbits in the different countries. No experimental evidence of the efficiency of collosol preparations had ever been produced. Apparently manganese greatly stimulated the production of antibodies but did not itself produce antibodies. He thought that manganese might do good in cases where the patients had shown some signs of an active immunity, but not in cases where there was a total absence of immunity. He did not think that the results obtained by the use of collosol preparations would be any better than those obtained by Wright's immuno-transfusion.

Dr. G. FITZGIBBON referred to the results obtained in cases which had been treated by injections of manganese chloride for sepsis. He agreed with Professor Bigger that this treatment could hardly be looked upon as being one of the most effective, although in some cases patients responded well to it. He thought it probable, however, that in these cases any cure was due to the patients being able to resist bacterial invasion.

Professor J. A. SCOTT thought the elements which produced blood clots were very much the same as antibodies. He thought it should be remembered there were different types of blood, and that in some rabbits manganese might produce changes, while in others it would not, because the types of blood were different.

Dr. V. M. SYNGE referred to the beneficial effect, in cases of boils, of the use of collosol manganese. Sometimes patients in whom an autogenous vaccine had failed would improve rapidly after a few injections of collosol manganese, while, on the other hand, some patients who had become better after an autogenous vaccine had not improved after collosol manganese injections. This fact seemed to him to be rather contrary to the conclusions of Dr. Horgan.

Reviews.

PHYSIQUE AND CHARACTER.

DR. E. KRETSCHMER'S contributions to psychiatry are practically unknown in this country, and we therefore welcome a translation of his notable work, *Körperbau und Charakter*, under the English title *Physique and Character: An Investigation of the Nature of Constitution and of the Theory of Temperament.*[1] The problem considered is the relation between human form and human nature. The poet, the novelist who takes such pains to describe the physical appearance of his characters, and the man-in-the-street, all intuitively recognize some general correlation between psychic type and physical constitution. Dr. Kretschmer, basing his views, not upon vague impressions and general reflections, but upon exact anthropological investigations and the study of psychological types, has arrived at a position which gives some support to the popular view. Briefly, he discovers statistical relational frequencies between certain forms of physique and certain psychic types. The author, who impresses the reader as not only an eminent psychiatrist but as an attractive writer, commences his work with the following quotation, which provides a fitting introduction to his thesis:

> *Caesar:* Let me have men about me that are fat;
> Sleek-headed men, and such as sleep o' nights:
> Yond Cassius has a lean and hungry look;
> He thinks too much: such men are dangerous.
> *Anthony:* Fear him not, Caesar; he is not dangerous;
> He is a noble Roman, and well given.
> *Caesar:* Would he were fatter! . . .

The fat men preferred by Caesar correspond to the cycloid or manic-depressive psychic dispositions which the author finds shows a clear biological affinity with a body-build which he describes under the term *pyknic*. The "Cassius" types, on the other hand, whom Caesar distrusted correspond to the schizophrenic psychic dispositions which, according to Kretschmer, have a clear biological affinity with a body-build which he describes as of the *asthenic* and *athletic types*, together with certain *dysplastics*. We do not, of course, wish to convey the impression that the distinction between the various types of physique is based upon mere fatness and leanness; actually it is based upon detailed researches of the physique, skeletal and muscular systems, the face and skull, the hair, skin, complexion, and ductless glands. Dr. Kretschmer holds that diagnosis by means of body-build is as vast and complicated a region as organic neurology, and that it calls for the accurate observation and co-operation of numerous observers. He modestly describes this book as a preliminary canter, and obviously confirmation by others working on a scheme similar to that outlined in his text is needed. In a general way it may be said, however, that his formulations will be recognized by most psychiatrists to be approximately true since they are based upon facts already known to experienced observers of abnormal psychic types. Particularly would we call attention to the tendency to dysplastic forms of growth in schizophrenia (dementia praecox). A superficial survey of the physique of the young people who come into asylums suffering from dementia praecox reveals a striking incidence amongst them of inhibited physical development. They are obviously inferior biological types, and exhibit, in particular, marked deviations from the normal sexual characteristics. In a chapter dealing with this subject the author emphasizes the fact that variations in physique in a dysgenital direction, and indeed of a eunuchoid as well as of an infantile nature, are relatively common among schizophrenes. This leads us, of course, to think of the work of Mott in this country, to which the author refers only in a footnote. Dr. Kretschmer warns us, as Mott has done, that we must beware of setting out the possible causal functioning of the generative glands in schizophrenic disease in the form of a simple massive, monosymptomatic disturbance of function. Castration of a soundly constituted man has, as is well known, no psycho-pathological results of a schizophrenic nature. If an endocrine etiology be accepted as probable in schizophrenia, we must regard it as a very tangled chemical relation between the brain and the glandular complex, in the etiology of which the generative glands are very obvious.

Such researches must be regarded as of fundamental importance since they tend to place psychiatry upon a firm biological foundation. In commenting in this JOURNAL of December 6th, 1919, on Mott's researches into the pathology of dementia praecox, attention was drawn to the fact that the regressive biological changes he described served to explain the clinical phenomena and psychic peculiarities of the subjects of this disorder. Dr. Kretschmer has an interesting chapter on this, in which he correlates the morphological findings in dementia praecox with its clinical manifestations, drawing particular attention to the fact that the disease is usually associated with inadequate sexual functioning. In seeking to correlate bodily habitus with inborn temperament it has to be borne in mind, as the author reminds us, that the factors responsible for the build and character in any given case are not entirely dependent on the inherited psycho-physical constitution. On the one hand, the body-build is influenced by occupation, mode of life, biological epochs, and nutrition; on the other, the personality depends, not only upon the inborn temperament, but upon all the experiences to which an individual is subjected from the day of his birth. It still remains, however, that there is something in the physical form and in the psychic reaction which is purely inherent and unalterable by circumstances or environment, and this is the problem considered by the author.

In the second part of the volume Dr. Kretschmer deals with the psychological aspects of his subject, and it may here be mentioned that his *cyclothyme* corresponds closely to Jung's *extrovert*, and his *schizothyme* to the latter's *introvert*. These two biological types include the great mass of healthy individuals as well as the corresponding psychotics scattered among them. Dr. Kretschmer would have us look on the biogenetic psychoses as variations from the biologically normal. He suggests that we should not look on certain types of personality as psychopathic abortive forms of certain psychoses, but vice versa, certain psychoses should figure as caricatures of certain normal types of personality. On this theory the psychoses are only uncommon exaggerated editions of large groups of healthy constitutions. In his study of temperaments, the author reveals himself a connoisseur of the subtle variations of human nature, and also as the possessor of a gift of character delineation which a novelist might well envy. The following picturesque description of the schizoid temperament could hardly be improved upon (p. 146):

> "Schizoid men have a surface and a depth. Cuttingly brutal, dull and sulky, like a mollusc without a shell—that is the surface. Or else the surface is just nothing; we see a man who stands in our way like a question mark, we feel that we are in contact with something flavourless, boring, and yet with a certain problematic taste about it. What is there in the deep behind all these masks? Perhaps there is nothing, dark hollow-eyed nothing-affective anaemia. Behind an ever silent façade, which twitches uncertainly with every expiring whim—nothing but broken pieces, black rubbish heaps, yawning emotional emptiness, or the cold breath of an arctic soullessness. But from the façade we cannot see what lurks behind. Many schizoid folk are like Roman houses and villas, which have closed their shutters against the rays of the burning sun; perhaps in the subdued interior light there are festivities. . . . A young man dreams away the lovely days of his youth. He is so clumsy and loutish that one could shake him. If he is set upon a horse he falls off at once. He smiles in an embarrassed way, rather ironically. He says nothing. One day there appears a volume of poetry he has written; exquisite feeling for nature; and every blow that some fat lout has given him as he passed by is moulded into an inner tragedy, and the polished rythms flow on full of quiet."

Or, in less sombre vein, the author makes the polite sensitive man live before us (p. 214):

> "His whole nervous system is tender; he flies from all that is common; he takes an aesthetic interest in tea, and is affected by the scent of hay. In society he prefers a carefully chosen circle. *Odi profanum vulgus.* Painful care is dispensed on tending the body. Such men may easily be upset by a bad ironing crease, they cannot get over aesthetic details, and they have a tendency to little vanities, and society pedanteries. They like to cultivate their own personalities, and observe their own psychic finesse."

[1] *Physique and Character: An Investigation of the Nature of Constitution and of the Theory of Temperament.* By E. Kretschmer. Translated from the second, revised and enlarged, edition by W. J. H. Sprott, B.A. London: Kegan Paul, Trench, Trübner and Co., Ltd.; New York: Harcourt, Brace and Co., Inc. 1925. (Demy 8vo, pp. xiv + 266; 32 plates. 15s. net.)

The author's investigations take him into the fields of family character and heredity, and a study of the book as a whole encourages the reader to believe that the problems of psychic life must not only be approached from a purely psychological aspect, but also from the point of view of natural history and biology. We can thoroughly commend this volume to those who are interested in psychiatry and its allied sciences.

THE PRACTICE OF GYNAECOLOGY.

PROFESSOR JELLETT has provided the profession with "the long and the short of it" in regard to both midwifery and gynaecology, and each of his volumes, whether full treatises or short textbooks, has met with a degree of success which is the best testimony to its worth. The fifth edition of the "long" *Practice of Gynaecology*[2] has just appeared, and presents a number of alterations and additions which have brought it up to date. Thus, the comparatively recent work on gas inflation of the peritoneal cavity receives adequate notice, while the work of Sampson and others on implantation adenomata of endometrial origin is well summarized. The connexion between the menstrual function and the ductless glands is more fully explored than in previous editions, and the author evidently leans to the side of scepticism as to endocrine therapy in disorders of menstruation. In the section dealing with endometrial implantations in the pelvis he expresses the view, with which we are in entire agreement, that there is need for much more experience of the results of conservative treatment. The indiscriminate performance of radical operations in such cases is to be deprecated until our knowledge and experience are considerably increased. New chapters have been added on sterility and on the general principles governing gynaecological operations. The latter gives very lucid and convincing expression to truths and principles which ought to be the guide of everyone who essays to operate on the female pelvic organs.

Dr. Walter Stevenson has contributed a very full, but at the same time succinct, discussion of the use of x rays and radium in gynaecology, and Dr. R. J. Rowlette is responsible for an optimistic chapter upon vaccine treatment. The chapters on operative methods are clearly written and well illustrated, and our only criticism is that it seems unnecessary to describe an operation at some length and then state that such a method ought never to be followed. This is a somewhat cumbrous way of teaching advanced students, but, of course, it is to be remembered that this is the "long" textbook, and that the author has also published a "short" one for those who prefer brevity.

Completeness and up-to-dateness are the main impressions which this edition leaves upon us, and the book can be recommended as an admirable textbook on the subject. We offer our congratulations to the author and also to the publishers.

PALMER OF RUGELEY.

DR. GEORGE FLETCHER'S book on *The Life and Career of Dr. William Palmer of Rugeley*[3] differs from those accounts of remarkable trials of which some have been lately reviewed in these columns. Instead of a formal and sometimes wearisome report of the evidence, we have here the outcome of almost a lifetime's study of this criminal and his doings, in which the author enjoyed certain personal advantages as a resident in the neighbourhood. He tells us that his first visit of inquiry was made only three years after the trial of Palmer for murder, and his last five years ago, so that this book is the result of more than sixty years' inquiry and study.

Our profession is justly proud of many members who have distinguished themselves and adorned their calling by their virtues and their talents. On the other hand, it has to deplore the undeniable fact that, like other callings, it has fostered some unspeakable villains such as the poisoners Palmer, Pritchard, and Lamson. Of these the subject of this biography was *facile princeps*, for it appears probable that he was guilty of the murder of at least a dozen persons, among whom were his own children, legitimate and illegitimate, and his wife, his mother-in-law, and brother; yet it was for none of these that he was tried and found guilty, but for the murder of his friend Cook, apparently committed in order to facilitate and conceal his thefts. Dr. Fletcher claims that, although a number of books have appeared on this subject, his is the first to deal fully with Palmer's life and career, and we think that this claim is justified and that no other work probably shows so clearly how long the murderer's career of crime had been and how extraordinarily unsuspicious and gullible were his neighbours and fellow practitioners. For this is not a case of a man of apparent respectability being at last detected in crime. Palmer had for long been leading a notoriously dissolute life, neglecting such practice as he once had, and associating with disreputable racing men and other shady characters.

The most astonishing aspect of the case is the medical, in which the ineptitude of practically all the medical men concerned, before the coroner's jury returned their verdict, is almost incredible. Not a shade of doubt of their good faith and intentions has ever been suggested, yet had they been in collusion with Palmer and accomplices before the fact they could hardly have played into his hands more completely. Not only the aged Dr. Bamford, who was probably past his work, but younger practitioners of good repute showed themselves astonishingly ready to accept the poisoner's suggestions as to the cause of death and to sign certificates accordingly. The scene at the *post-mortem* examination of Cook has often been described, and is indeed a commonplace in all books on forensic medicine and toxicology; yet no matter how often its description is read, the amazement of the reader at such a fiasco is unabated. It still remains inexplicable that the conduct of Palmer on that occasion did not arouse the very strongest suspicions in the minds of the spectators. Yet it remained for the stepfather of the murdered man to insist on an inquiry, on the inquest, and on probing the matter to the bottom.

Nearly all the great names of the Bench and Bar and of the medical profession of the day appear in the records of the trial, and one of the great benefactors of medical charities, Mr. George Herring, then a betting commission agent, was a witness for the prosecution. The case occasioned the passing of what is popularly known as "Palmer's Act," under which the venue of a criminal trial may be changed when popular feeling seems likely to jeopardize the course of justice. Another innovation was the starting of a hunger strike by Palmer when in prison, in which, less determined than the women suffragists, he did not persist when threatened with the stomach pump.

It is difficult, nearly seventy years later, to realize the tremendous excitement caused by this trial throughout the country. Such an evil notoriety was attached to the name of Rugeley that the inhabitants petitioned the Home Secretary to allow the name to be changed. Lord Palmerston wisely laughed them out of their wish, saying, "If you want to change the name of your town, why not pay me the compliment of calling it after me?" The deputation retired, and the true significance of Palmerston's joke only dawned upon them on their way home.

Despite some repetitions and a certain looseness of construction, Dr. Fletcher's book is most readable and interesting. We only regret that it is not furnished with an index.

NOTES ON BOOKS.

DR. FAIRBAIRN'S *Text-Book for Midwives*, which was first published in 1914, has recently appeared in a fourth edition,[4] and it is therefore obvious that it is meeting with a well deserved popularity. In this new edition the main alterations are those necessitated by the recent revision of the rules of the Central Midwives Board and by the regulations regarding the lengthened training which will come into force a year hence. Similar alterations have been made in regard

[2] *A Practice of Gynaecology.* By Henry Jellett, M.D., F.R.C.P.I. Fifth edition. London: J. and A. Churchill. 1925. (Roy. 8vo, pp. xiii + 744; 417 figures, 12 plates. 25s. net.)

[3] *The Life and Career of William Palmer of Rugeley.* By George Fletcher, M.D.Cantab. London: T. Fisher Unwin, Ltd. 1925. (Demy 8vo, pp 198; illustrated. 12s. 6d. net.)

[4] *A Text-Book for Midwives.* By John S. Fairbairn, M.A., B.M., B.Ch. Oxon., F.R.C.P.Lond., F.R.C.S.Eng. Fourth edition. Oxford Medical Publications. London and New York: H. Milford, Oxford University Press. 1925. (Roy. 8vo, pp. xiii + 355; 113 figures, 3 plates. 25s. net.)

to the rules of the Scottish Central Midwives Board where these differ from the English rules. Dr. Fairbairn has taken the opportunity of introducing some criticisms on points in which the regulations of the Scottish Board differ from those of the English. We are not sure that this book was quite the best place for such criticisms, which do not directly concern midwives or midwifery pupils. His observations are, we have no doubt, of the highest value, for Dr. Fairbairn is himself a member of the English Board, but they might, we think, have better appeared in the medical periodical press. This, however, does not affect the value of the book as a guide to midwives and midwifery pupils. It provides for them a thoroughly sound and interesting presentation of the whole subject, and can be heartily commended, especially to those who are studying for the examinations.

The importance of a child's mental and nervous health ranks equally with his physical health, and both are interdependent. *Safeguarding Children's Nerves*,[5] written by two doctors who have had considerable experience of the psychological problems of children, is published under the auspices of the American Child Health Association. The language is clear and not technical, and an endeavour is made to set out the elementary principles underlying the growth of the mental and nervous health of the normal infant and child. The avowed object of the book is to educate parents to protect the developing nervous system from both "the hardness and softness" of modern life. The book is pleasantly got up with a small picture at the head of each chapter, showing toddlers delightfully employed in the open air. The keynote of the book is to emphasize the importance of health and how to generate and maintain it. The authors say that most children will be normal in their nervous function if their parents and relatives allow them to be so: "Self-denial, self-control, and self-discipline, these are the all-important factors for the salvation of the nervous child from his own tendencies as he grows up." The book deals with heredity, rest and fatigue, discipline, habits, dreads, and dislikes. The treatment of defective and backward children is suggested. The concluding chapter gives a warning against charlatanism and advertised cures of various kinds.

The treatise of the fifteenth century physician, Giovanni di Albertis of Capodistria, on the plague, of which the full title is *De praeservatione corporum a pestilentia et de causis pestilentiae et modis ejus*,[6] has recently been published by Professor ARTURO CASTIGLIONI of Trieste from the MSS. in the National Library at Vienna, together with a scholarly introduction which forms a valuable contribution to the history of epidemiology. The treatise is dedicated to the Emperor Frederick III, for whose personal use it appears to have been composed. It is divided into a series of chapters of very unequal length, in which, in addition to general observations on the cause of the disease and the time and places in which it occurs, a number of therapeutical rules are laid down, particularly as regards food, exercise, sleep, and drugs for local and internal administration.

The little book on *Small Pox and Vaccination*,[7] by Dr. BENJAMIN WHITE, Director of the Biologic Laboratories in the Massachusetts Department of Public Health, and a professor in the Harvard Medical School, is the latest addition to the series of "Harvard Health Talks," the aim of which is to supply the layman with information on medical subjects of general importance. An excellent account is given of the history of small-pox and vaccination, as well as of the prevalence of small-pox in those countries in which universal vaccination is not enforced.

The reference book entitled *The Medical Who's Who* (stated to have made its last appearance in 1918, though we have seen no later edition than that of 1915) has now been revived under fresh management. The new edition, bearing date 1925,[8] is more comprehensive than its predecessors, and differs from them in binding, in size of type and page, and in certain other respects, though the general plan has been preserved. While the volume is by no means a complete list of the medical profession at home and abroad, it is stated that "inclusion in this work is open to every registered medical practitioner and that proper particulars are printed free of any condition, save only that of legal qualification." The entries appear in alphabetical order, and each name is followed by brief details of qualifications, professional work past and present, and date of registration, together with some particulars of a more personal nature. An index, arranged topographically, is appended, the London addresses being given in full. The type, though small, is very clear, and much care has evidently been taken in revising the material for the press. The rather flowery preface might be cut down with advantage in later editions.

The chief interest of Dr. LEO BUERGER'S work on *The Circulatory Disturbances of the Extremities*[9] is that it contains a very full pathological and clinical description of thrombo-angiitis obliterans, which is sometimes known as Buerger's disease. In addition to a detailed account of other diseases of the peripheral circulation, several chapters are devoted to anatomy and physiology as well as to capillary microscopy. The book, which is freely illustrated, will prove a valuable work of reference.

A revised edition of the *West London Hospital Pharmacopoeia*[10] has been published. Besides a considerable number of new formulae, dosage tables, notes on infant feeding, and the treatment of poisoning, charts of special diets have been included. Blank pages are provided for further additions, and the book retains its convenient size for the pocket.

[5] *Safeguarding Children's Nerves.* By James J. Walsh, M.D., Ph.D., Sc.D., and John A. Foote, M.D. With a foreword by Honorable Herbert Hoover. London: J. B. Lippincott Company. 1925. (Cr. 8vo, pp. ix + 272; illustrated. 9s. net.)

[6] *Il Libro della Pestilenza di Giovanni di Albertis da Capodistria (A.D. MCCCCL).* With introduction by Arturo Castiglioni. Bologna and Trieste: Licinio Cappelli. 1924. (Roy. 8vo, pp. 67.)

[7] *Small Pox and Vaccination.* By Benjamin White, Ph.D. Harvard Health Talks, 13. Cambridge, Massachusetts: Harvard University Press; London: H. Milford, Oxford University Press. 1924. (Fcap. 8vo, pp. 90. 4s. 6d. net.)

[8] *The Medical Who's Who.* Seventh edition. London: Grafton Publishing Co., Ltd. 1925. (Demy 8vo, pp. lviii + 770. 30s. net.)

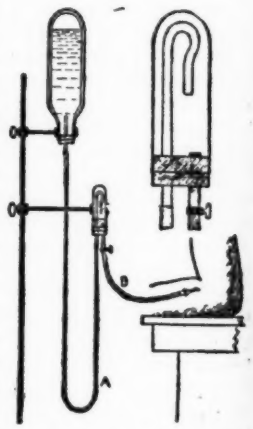
[9] *The Circulatory Disturbances of the Extremities.* By Leo Buerger, M.A., M.D. Philadelphia and London: W. B. Saunders Company. 1924. (Roy. 8vo, pp. xiii + 628; 192 figures. 42s. net.)

[10] *West London Hospital Pharmacopoeia.* Revised edition. London: L. Upcott Gill and Son, Ltd., The Avenue Press. 1925. (3½ × 5½, pp. xix + 92.)

MEDICAL AND SURGICAL APPLIANCES.

A Drip for Continuous Intravenous Infusion.

DR. H. H. MOLL (Resident Medical Officer, General Infirmary, Leeds) has devised a drip for the continuous intravenous infusion of glucose by the drop method. It is air-embolism proof and self-regulating. It consists of a small glass chamber and a rubber cork, in which two holes have been bored. One end of a piece of fine glass tubing is curved to the shape of a shepherd's crook; the other, connected by a rubber tubing to the main tank, is passed through one of the holes, while some rubber tubing is tightly fitted into the second hole and connects the drip to the recipient's vein. The drip is interposed between the main tank above and the recipient's arm beneath at any height, provided that the proximal loop of tubing, A, connecting the main tank with the drip, be at a lower level than the distal one, B, connecting the drip to the patient's vein. Water is then run through the drip for a few seconds. A negative pressure will develop inside the glass chamber of the drip, allowing it to be flooded up to a given level. By clipping the distal tube the rate of the drop can be regulated. Any obstruction occurring in the distal tube will cause the pressure within the glass chamber to rise so that the drip will stop flowing automatically. The drip can be disconnected from the main tank during the act of refilling without emptying itself, thus preventing air embolism. Mr. Charles F. Thackray, Great George Street, Leeds, has undertaken to make the drip.



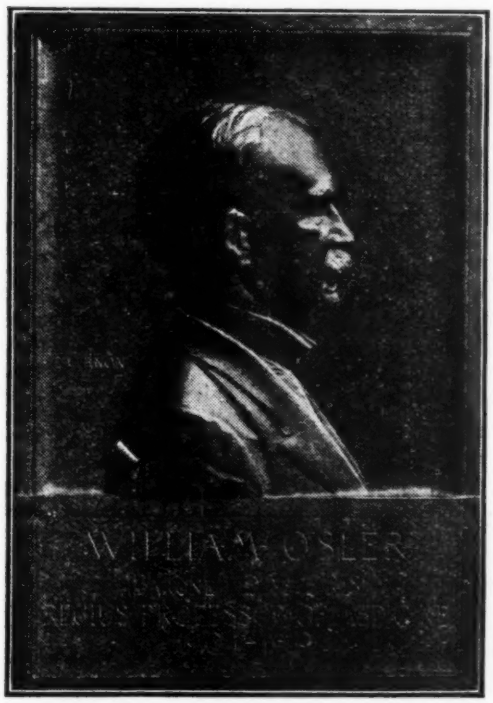
An Anaesthetic Inhaler.

Dr. W. R. SOMERSET, honorary anaesthetist to the Wolverhampton and Staffordshire Hospital, has devised a new inhaler, which can be used for open or closed anaesthesia. The following advantages are claimed for it. It is simple in construction and economical in use, and with it nitrous oxide, ethyl chloride, a chloroform mixture, or ether, by the open or closed method, can be administered. The anaesthetic can be renewed by opening the lid and dropping it on to the pad without removing the inhaler from the patient's face. When used with closed anaesthesia very little vapour escapes into the atmosphere. In operations requiring a lateral position of the head it is possible for the anaesthetist to keep well away from the field of operation, and there is less interference with the work of the surgeon than when the ordinary mask is used. The metal face-piece is attached to a metal cylinder, which is divided by a vertical partition into two compartments, the smaller communicating at the bottom with the interior of the face-piece, while the larger compartment is closed at the bottom and opens at the top, with a projecting metal tube at the side. The upper end of the cylinder has a compartment with a pad of absorbent material to receive the anaesthetic, and there is a sump at the bottom of the large compartment to trap any excess of anaesthetic. Attached to the metal tube is a rubber bag with a tap at the extremity, to which an oxygen tube can be attached. Bayonet joints enable the cylinder to be turned so that the bag opens into either compartment as required.

THE SIR WILLIAM OSLER MEMORIAL AT OXFORD.

UNVEILING OF PLAQUE.

A BRONZE plaque in memory of Sir William Osler, Bt., F.R.S., M.D., F.R.C.P., late Regius Professor of Medicine, was accepted on behalf of the University of Oxford and unveiled by the Vice-Chancellor, Mr. Joseph Wells, M.A., Warden of Wadham, on the afternoon of Wednesday, June 10th, in the Court of the University Museum, in the presence of a large and distinguished gathering. Among those present were Lady Osler, Sir Humphry Rolleston, Bt., President of the Royal College of Physicians and Regius Professor of Physic in the University of Cambridge, Dr. J. G. Adami, Vice-Chancellor of the University of Liverpool, representing McGill University, Lieut.-General Sir William Leishman, Director-General Army Medical Service, the Dean of Christ Church, the Master of University (Sir Michael Sadler), the President of University, Professor E. B. Poulton, Professor Arthur Thomson, Professor Ramsay Wright, Mr. A. P. Dodds-Parker, and Dr. Ainley Walker (Dean of the Faculty of Medicine).



The plaque, which has been affixed in the University Museum by permission of the Delegates, is the work of M. Vernon of Paris, and is a replica of that made for the Faculty of Medicine of Maryland, U.S.A. It was presented to the University, on behalf of the subscribers to the Sir William Osler Memorial Fund, by the President of Magdalen, Sir HERBERT WARREN, who spoke in terms of warmth and feeling of Sir William Osler's services to Oxford and to Medicine, and of the charm and inspiration of his personality. He referred briefly to the remarkable growth and development of the School of Medicine and its scientific departments, since the time when Sir Henry Acland set to work to devote himself to the restoration of an almost derelict school. By their genius and enthusiasm he, and his successor, Sir John Burdon-Sanderson, infused new life into the school and launched it on the fresh career of usefulness to which the late Regius Professor so largely contributed.

The VICE-CHANCELLOR read a telegram from Sir Robert Hadfield conveying respectful admiration and homage to the memory of his late friend. The Vice-Chancellor said it was a very great personal pleasure and honour to him to accept the memorial on behalf of the University. There were many who knew Sir William Osler as a name of authority in medicine; but in Oxford he was remembered even more for his never-failing kindness, his sympathy, his love of children, and his magnetic personality. He was not only a great man, but a most lovable one. It was very fitting that his memorial should stand in a place connected with so many great men of Oxford, and especially of Christ Church, his own college.

After the Vice-Chancellor had unveiled the plaque a wreath of laurel and white heather was placed at its foot by Mr. J. F. Fulton, Magdalen and Harvard, on behalf of the Inter-State Post-Graduate Assembly of American Physicians and Surgeons.

Tribute by Sir Humphry Rolleston.

Sir HUMPHRY ROLLESTON, in a brief tribute to Sir William Osler's life and work, said:

Osler's services to medicine, like the man himself, were remarkable for their infinite variety; his activities were not mainly confined, as have been those of some heroes of our profession, to one field, such as laboratory research, clinical observation, teaching, or education, for he played a prominent part in all these spheres. Osler first made his mark as a microscopist—in an investigation of the Canadian Diatomaceae, then of the blood-platelets, and somewhat later of the malarial parasite; and as a morbid anatomist at McGill, Montreal, he laid the firm foundations of that sense of proportion so essential for a physician. As a clinician he established new syndromes, such as erythraemia (Vaquez-Osler disease), hereditary telangiectases, splenic anaemia, and pointed out certain symptoms or signs in recognized diseases, so that "Osler's nodes" in subacute bacterial endocarditis are familiar. The most modern methods of the laboratory were fully utilized to supplement the routine and thorough examination of the patient, the new and the old being skilfully blended so as to obtain the best of both. Like Trousseau he ranged widely over the whole field of medicine and enriched it both by observation and by deductions based on collected statistics—for example, in his studies on endocarditis, cancer of the stomach, and on typhoid fever; his literary output in forty-nine years amounted to more than 770 books, papers, and addresses.

Much learning is sometimes a handicap to a teacher, but ever young in mind, and with a wide sympathy and knowledge of young men—for he was their fellow student all his days—Osler was the ideal and inspiring guide of his pupils. He taught them, not medicine only, but humanity and the way of life, more by example than by solemn precept.

Ever active in the wards, his influence stimulated others to individual observation and research, and so to advance the science and art of healing. His writings, especially his great textbook, remarkable alike for its conciseness, completeness, and atmosphere of personal experience, brought him numberless followers whom he had never met. A happy manner of persuasive enthusiasm admirably fitted him as a great leader in campaigns for the prevention of diseases, such as enteric fever, malaria, tuberculosis, and venereal infection, and he not only originated but carried through successfully schemes for the benefit of the nations. His most remarkable success, however, was as an educator of the medical profession; this was largely due to his personality and to the way he put into effect his motto, "Write me as one that loves his fellow men." A great believer in the educational and harmonizing influence of medical societies and in united effort, he was the moving spirit in starting the Association of Physicians of Great Britain and Ireland, and for its first twelve years the senior editor of its official organ, the *Quarterly Journal of Medicine*. These were but two examples of his many inventions for the good of his fellow practitioners. Devotion to old books and to medical history made him a power for a broad culture, and with Sir Norman Moore and his brother Regius of Cambridge he was largely responsible for the increasing study of this pleasant by-path in medicine. As a tribute to his wide sympathy with all forms of sound learning there could not have been a greater than his election as President of the Classical Association (1919), and thus he recalled the scholar-physicians, such as Linacre, whom he so much admired, and his profession was once more his debtor for an added prestige. We shall not look upon his like again.

The Regius Professor of Medicine, Sir ARCHIBALD GARROD, proposed a vote of thanks to the Vice-Chancellor for presiding, and referred to the position happily chosen for the memorial in close proximity to the statue of Sydenham, and near the figures of Harvey, Hunter, Acland, and Burdon-Sanderson. It had, he said, been the very good fortune of their medical school that the Regius chair had been held in succession by three great men. They recognized in Acland the parent of modern science in Oxford, of which that museum was the chief monument. They recognized in Burdon-Sanderson the father of their physiological department, which they knew to be unsurpassed, and fondly hoped unequalled, by any other university. It was only fitting that the third of these great men should be represented in that corner of the museum, which was in a sense a Valhalla of medicine. They of the medical school were proud of being members of a great university with no narrow outlook, but celebrated the world over as a seat of learning in classics, the humanities, science, law, and medicine.

THE OSLER MEMORIAL FUND.

By a recent Decree in Convocation the University of Oxford has gratefully accepted the Fund subscribed in memory of the late Regius Professor of Medicine, and has made the following regulations for its administration:

1. The fund shall be called "The Osler Memorial Fund."
2. A bronze medal shall be awarded once in every five years to the Oxford medical graduate who shall, in the opinion of the Board of Awarders hereinafter constituted, have made the most valuable contribution to the science, art, or literature of medicine, and who has not previously received the medal.
3. For the purposes of the preceding clause the term "Oxford Medical Graduate" shall mean a person, whether man or woman, who has taken the degrees of bachelor of arts and bachelor of medicine at the University of Oxford.
4. The Board of Awarders shall be constituted as follows: the Vice-Chancellor; two professors of the Faculty of Medicine elected by the Board of the Faculty of Medicine; two persons not being members of the University, elected by the Hebdomadal Council on the recommendation of the Board of the Faculty of Medicine. The elected members of the Board of Awarders shall hold office for five years and be re-eligible.
5. All expenses in connexion with the award of the bronze medal shall be paid out of the income of the Fund.
6. The residue of the income of the Fund may be used at the discretion of the members of the Board of Awarders resident in Oxford in making grants from time to time to teachers in the Oxford Medical School, recognized as such by the Board of the Faculty of Medicine, to enable them to pursue some special study connected with medicine outside the University.
7. Applications for such grants shall be made to the Dean of the School of Medicine, who shall act as Secretary to the Board of Awarders.

First Quinquennial Award.

The bronze medal to be given every five years to the Oxford medical graduate who has in the opinion of the Board of Awarders made the most valuable contribution to the science, art, or literature of medicine has been awarded to Sir Archibald E. Garrod, K.C.M.G., F.R.S., D.M., F.R.C.P., Regius Professor of Medicine and Student of Christ Church.

The Board of Awarders consisted of the Vice-Chancellor, Mr. Joseph Wells, M.A., Warden of Wadham, Sir Charles S. Sherrington, O.M., President of the Royal Society, Sir Humphry D. Rolleston, President of the Royal College of Physicians and Regius Professor of Physic in the University of Cambridge, and Lieut.-General Sir William B. Leishman, Director-General Army Medical Service.

THE CHARCOT CENTENARY.

COMMEMORATION AT THE ROYAL SOCIETY OF MEDICINE.

THE centenary of the birth of Jean Martin Charcot was commemorated by a conversazione and lecture at the Royal Society of Medicine on June 15th. The Fellows and guests were received by the President (Sir StClair Thomson) in the library, where, thanks to the assiduity of the honorary librarian (Mr. Walter G. Spencer), a very large collection of Charcot's writings, original and in translation, including his collected works in nine volumes, and his many essays in periodical literature, was displayed, together with the bibliography, at present only in manuscript, which Mr. Spencer has prepared. Various portraits of Charcot were also on view, including an oil painting lent by the Wellcome Historical Medical Museum, and a copy of the well known print of Charcot delivering at the Salpêtrière a clinical lecture to an audience which included most of the leading French neurologists of the time. Two specimens which Charcot himself brought over to the International Medical Congress in London in 1881, illustrating bone and joint lesions in tabes, were lent for the evening by St. Thomas's Hospital, to which he had afterwards presented them; one of them illustrated spontaneous fracture of the ulna, the other the condyles of the femur, showing the condition generally known in this country as Charcot's disease. The most recent of the Charcot memorials shown was the special medal which has been struck in Paris to commemorate the centenary.

Sir STCLAIR THOMSON mentioned that the gathering was honoured by the presence of M. Campana (French Consul-General) and some members of his staff, of Dr. Dubreuilh (Bordeaux), Dr. Jovan Popovic (Jugo-Slavia), a travelling Fellow of the Rockefeller Foundation, and of a number of medical officers of health from ten countries of Central and South America, who are at present in London, under the auspices of the League of Nations, for the study of public health administration. The Académie de Médecine of Paris, which had asked Sir D'Arcy Power to represent it on that occasion, had written cordially thanking the Royal Society of Medicine for joining in the commemoration of the great French physician. Professor Achard, the permanent secretary of that body, wrote that Charcot had received no higher appreciation anywhere than among the profession in Great Britain. Nor was it forgotten in the Académie de Médecine that the great names of Ferrier and Horsley had secured for British neurology a conspicuous place in the medical science of the world, and that the Neurological Section of the Royal Society of Medicine was ably carrying forward the work of these illustrious seniors.

Dr. FARQUHAR BUZZARD, President of the Section of Neurology, then delivered an appreciation of Charcot. He began with an expression of gratitude to Mr. Walter Spencer for collecting the works of the great Frenchman and arranging them in the library. Those works were sufficient to show how numerous and versatile and historically important were Charcot's contributions to medical science. In a sketch of Charcot's life Dr. Buzzard recalled that he was the son of a working coach painter who, recognizing the brilliant abilities of his son, decided to give him a medical education. The turning point in Charcot's career was his appointment to be medical officer of the Salpêtrière, then what in this country would be called a Poor Law infirmary. He continued to occupy that position for thirty years, making it the chief neurological clinic in Europe. There, in 1866, he inaugurated his weekly clinical lectures, upon which his fame was largely built; in 1869 there appeared the first description of what was named in England Charcot's joint disease; in 1882 a professorship of neurology was created for him, and a neurological institute was founded in which his genius could exercise itself to the full. To get a proper orientation it had to be remembered that Charcot was about twenty years junior to Duchenne of Boulogne, who was the founder of French neurology. The two together might be said to have discovered a new field where the harvest was ripe for the gathering. According to a contemporary, Charcot was more of a co-ordinator and a man of method than a true inventive genius. But he was a pioneer of no ordinary qualities, and he lent distinction to every task to which he set his hand. He was second to none in his ability to make observations, and he excelled all others in his power of measuring the results of his labours and giving them their proper presentation, whether by pen or word of mouth. It

was difficult to think of an instance of a British physician who, in addition to making countless contributions to scientific knowledge, could compare with Charcot in his ability to attract students from all over the world by his inspired gift of exposition. Had he not been a physician, and had the stage been his career, he would not only have been a leading actor and stage manager, but no doubt he would also have painted the scenery and designed the dresses. Dr. Buzzard gave an interesting account of Charcot's domestic life and his daily routine, in which he was as methodical as in his scientific observation. He was not a proud man, he cared nothing for worldly distractions, and his artistic temperament—for he was no mean artist and connoisseur—left him curiously lacking in the ability to appreciate the value of money. He was generally so indifferent to the payment of fees that his patients would come to his secretary afterwards to be relieved of their embarrassment or would leave the fee surreptitiously behind them. The rank of his patients never impressed him. Once when a princess whom he kept waiting sent in some angry remonstrance, he remarked that evidently she was not aware that they had taken the Bastille! But he was, nevertheless, highly appreciative of the honorary distinctions which came to him in his later days from learned bodies all over the world. He was always ready also to give honour to others, and his appreciation of British medicine was high. He was the first to talk of Jacksonian epilepsy, he early recognized the work of Ferrier on cerebral localization, and he supported the election of Lister as a foreign associate of the French Academy. Charcot was to be regarded as one of the founders of neurology, a supreme exponent of the science and art of medicine, and probably the finest teacher of modern times. Dr. Buzzard concluded with some description of the recent centenary commemoration in Paris, which Sir StClair Thomson and himself attended. One of the events was honoured by the presence of the President of the Republic. Altogether it was perhaps the most wonderful tribute ever paid to any medical man, and it was paid to him, not as a scientist, nor as a discoverer, but just as a physician whose work and personality had made a deep and permanent impression on the science and art to which he had devoted his talents and his life. It was difficult to imagine our own Government commemorating so enthusiastically the work of even a Lister or a Jenner.

Sir DAVID FERRIER, in proposing a vote of thanks, spoke of his personal acquaintance with Charcot, whom he first met, after some preliminary correspondence, about fifty years ago, when for a time he attended Charcot's clinic at the Salpêtrière. Charcot was then at the zenith of his fame. He had converted what was originally a large old workhouse infirmary into the most attractive and most visited clinic in Paris, or indeed in the world. There, in the out-patients' department and in the wards, he demonstrated the wonderful phenomena of hysteria, convulsions, and so forth, and in addition many forms of organic degeneration, such as disseminated sclerosis and the disease which bore his own name. The extraordinary power and fascination he had over his patients was very striking; he could get them to do anything. He was a man of dignified presence, rather sallow in complexion, his cast of face resembling that of the great Napoleon—a resemblance of which he liked to be reminded. On one occasion he had said to Charcot how much the lucidity of French writers was to be admired, and Charcot had answered that the French language did not allow anyone to be obscure. But Sir David Ferrier thought also that much was due to Charcot's own habit of clear thinking and his love of system. He spoke English well, though he was diffident about using it. One domestic recollection which Sir David Ferrier had was of Charcot's son, the distinguished explorer, Dr. Jean Charcot, then a boy of 6, reciting Gray's "Elegy." Shortly before his death Charcot promised to take part in the proceedings of the Neurological Society, but his death (in August, 1893) from angina pectoris occurred before the promise could be fulfilled. His reputation and achievements made him worthy to be called one of the glories of France.

INTERNATIONAL CONGRESS OF RADIOLOGY.

LONDON, July 1st to 4th.

WHEN in 1891 Crookes discovered that certain corpuscular rays, known as the cathode rays, were created by an electric current passing through a high vacuum tube, there was no obvious indication that a new era in medical diagnosis and treatment was about to commence. Four years later, however, Roentgen discovered that if these cathode rays struck a solid body they gave rise to a hitherto unknown series of light vibrations—as he was not sure of their nature he called them *x* rays—which possessed great powers of penetration through many substances. The medical possibilities of this discovery soon became apparent, and its application became much simplified when Professor Jackson, in 1896, introduced an anticathodal target, thereby concentrating the area of production of the *x* rays and providing a focus for their origin. The gas tube in use to-day remains almost identical with Jackson's model. One of the first *x*-ray photographs taken was the achievement of Sir Oliver Lodge, and very early work was also done in this country by Campbell Swinton; a small plate by him showing the bones of the hand was the first *x*-ray photograph (skiagram) published in the BRITISH MEDICAL JOURNAL. The medical application of the new discovery was energetically investigated by Thurstan Holland of Liverpool, Mackenzie Davidson of London, and J. Macintyre of Glasgow, amongst others. Its use for the diagnosis of bone lesions was soon followed by its application to diseases of the kidney, the chest, and the abdomen. Gradually a specialty developed, and radiological departments were established in hospitals under the supervision of trained medical *x*-ray workers, now known as radiologists.

In 1897 the Röntgen Society was founded for the scientific study of the *x* rays, and the improvement of the apparatus by which they are produced; its first president was the late Professor Sylvanus Thompson. A British Electro-Therapeutical Society was also formed for the investigation of the medical applications of the rays, and a few years later, when the Royal Society of Medicine formed an Electro-Therapeutical Section, the two were merged. At a much later date, in 1920, the British Association for the Advancement of Radiology and Physiotherapy was established, and owing to its representations the University of Cambridge established a diploma in radiology and electrotherapeutics. In 1923 a committee of these three societies, under the chairmanship of the late Sir Archibald Reid, resolved to found the British Institute of Radiology to serve as a clearing house for all matters pertaining to radiology in both its physical and medical aspects. The old chapel of the Russian Embassy at 32, Welbeck Street, was acquired and fitted up for its new purpose, as was described in our issue of November 8th, 1924 (p. 871).

Concurrently with this advance in Great Britain, similar movements were on foot in other countries, and attempts were made to arrange international meetings of radiologists. These plans were seriously interfered with by the war, but meetings of international scope had been held previously in Amsterdam, Germany, and elsewhere, and the British Medical Association encouraged this new department of practical medicine by arranging special sections at its Annual Meetings. Radiological journals also came into existence, and the *Acta Radiologica* of Scandinavia was prominent amongst those making an international appeal. The coming congress in London (from July 1st to 4th) represents, however, a new departure by reason of its magnitude and its extensive programme. It appears likely that a record number of delegates will attend, and that the number of countries represented will be unprecedented.

A matter of great importance has emerged in recent years —namely, the protection of radiologists. The British *X*-Ray and Radium Protection Committee, formed a few years ago by representatives of the three societies mentioned above under the chairmanship of Sir Humphry Rolleston, issued a preliminary report in 1921, and a second report in 1923; its recommendations have been adopted by almost every country in the world. The assistance of the National Physical Laboratory was invoked, and early in 1924 the committee issued the pamphlet mentioned in our issue of March 8th, 1924 (p. 434), defining various protective measures, both with regard to the equipment of radiological departments and the safeguarding of operators; it may be hoped that such tragedies as have occurred in the past will soon be entirely prevented. The co-operation of radiologists from all countries will materially aid in this by discussion and by the establishment of international standards.

INTERNATIONAL CONGRESS.

One of the first proposals of the British Institute of Radiology was to hold an International Congress in London in order to make its objects more widely known and to enlist the co-operation of radiologists in other countries. This proposal, which had the support of the Röntgen Society and the Royal Society of Medicine, met with a very favourable response, and, owing to the number of delegates who have signified their intention of being present (over a hundred representatives are expected from America) and the many papers which have been submitted, the work of the Congress is to be conducted in three sections. As the house of the British Institute of Radiology was not large enough for so many, and to accommodate also an exhibition of radiological apparatus, it has been found necessary to engage the Central Hall, Westminster, where most of the meetings of the Congress will be held.

The Congress will be officially opened on Wednesday, July 1st, at 2.30 p.m., by the Duke of Connaught, who will be accompanied by the Minister of Health (Mr. Neville Chamberlain). A reception will be held by the President of the Congress, Mr. Thurstan Holland, on the previous evening, at the house of the Royal Society of Medicine. As already said, the work of the Congress will be conducted in three sections: for physics, for electrotherapy and actinotherapy, and for radiology, respectively. On the morning of July 1st a joint discussion will be held by the Sections of Physics and Radiology on international units and standards for *x*-ray work. This important discussion will be opened by Professor Sir W. H. Bragg and Dr. Béclère of Paris. At the same time, in a separate session, papers of more strictly medical interest will be read, dealing with the gall bladder, with radium therapy, and with diagnosis of lesions of bones and teeth, with pregnancy and embryology, and with the urinary tract. On Wednesday afternoon, after the official opening, the discussion on international units will be resumed, and papers on the diagnosis of gall-bladder diseases and on radiotherapy will be read. In the evening the Sylvanus Thompson Memorial Lecture will be delivered by the Duc de Broglie of Paris, his subject being the absorption of *x* and gamma radiations and the secondary radiations which accompany them.

On Thursday morning the three Sections will continue their work, and among the discussions will be one on actinotherapy, to be opened by Sir Henry Gauvain. In the afternoon a visit will be paid to the National Physical Laboratory at Teddington by the Physics Section, and the other Sections will continue discussions opened in the morning. On Thursday evening, at 8.30, the Congress dinner will be held at the Great Central Hotel, Marylebone Station.

On the morning of Friday, July 3rd, Dr. Rollier and Dr. Leonard Hill will continue the discussion on actinotherapy, and papers will be read dealing with the thoracic organs and *x*-ray therapy, amongst other subjects. In the evening Sir Berkeley Moynihan will deliver the Mackenzie Davidson Memorial Lecture, on the relation of radiology and surgery.

On Saturday morning, July 4th, papers will be read on the use of radiology in the diagnosis of disorders of the nervous system and on *x*-ray therapy, and at 12.15 p.m. the international delegates will meet to make arrangements for the formation of an international committee.

During the Congress an exhibition of radiographs will be on view in the lecture hall of the British Institute of Radiology, including many relating to papers read at the Congress. The Institute building will be used as a central bureau; visitors will be welcomed there, reception rooms being provided for members. A Ladies' Committee has been formed to make arrangements for entertaining the wives of members of the Congress.

An exhibition of radiological, electro-medical, and actinotherapeutical apparatus will be arranged at the Central Hall, Westminster, and will contain all the latest forms of apparatus from this and other countries, the American and German sections being well represented. In this exhibition will be included books and other objects of interest. Visits to Oxford, Manchester, Cambridge, Edinburgh, Glasgow, Salisbury, Stonehenge, and Winchester, with extensions, are being organized, and a garden party will be held on Saturday afternoon.

The President of the Congress is Mr. C. Thurstan Holland, Ch.M.; the Vice-Presidents are: Dr. A. E. Barclay, President of the Röntgen Society; Dr. Stanley Melville, President of the Electro-Therapeutic Section of the Royal Society of Medicine; and Sir Humphry Rolleston, President of the British Institute of Radiology. The general secretary is Dr. Stanley Melville, and the joint executive secretaries are Drs. J. E. A. Lynham and J. Muir, from whom copies of the programme and other information may be obtained. All communications should be addressed to them at the British Institute of Radiology, 32, Welbeck Street, W.1. The fee for membership of the Congress is two guineas. A detailed programme of the Congress has been prepared, and it is intended to publish the papers read at the Congress in the *British Journal of Radiology*.

ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the Committee fifty-two cases were considered and £573 voted to thirty-nine applicants. The following is a summary of some of the new cases relieved.

M.R.C.S. (1913), aged 35, who helped his father in practice until the father's death last year. Applicant served in France, Salonica, and Egypt from 1914 to 1918, and was discharged on account of dysentery and malaria. Disablement pay £126 per annum. He discharged himself from hospital, but was taken suddenly ill, and is now in lodgings in London at a cost of £2 10s. a week. An emergency grant of £20 to help with debts contracted during this illness was paid. The case was brought to the notice of the Fund by the Officers' Association.

Widow, aged 62, of M.R.C.S. who practised in London. She divorced her husband in 1906; he married again, and died in 1914. Since 1906 the applicant has supported herself as a manageress in several posts, but she suffers from severe varicose ulcers and has been obliged to give up her posts. She had cerebral haemorrhage on February 15th, 1925. Has recovered to the extent of getting about a little, but could only take a very light post. She has no children and no friends who can give any material assistance. The case was brought to notice by the Charity Organization Society. Voted £26 in twelve monthly instalments.

The daughter, aged 77, of M.R.C.S.Eng. who died in 1872. Applicant and her sister kept a girls' school until too old to carry it on. She has an annuity of £67 and earned £10 last year by teaching French and other languages. A boarder pays £1 a week. Friends contributed £30, and her rent and rates come to £77 per annum. Applicant's sister was an annuitant of the Fund until her death last year. Voted £12 in twelve monthly instalments.

Daughter, aged 29, of L.R.C.P.Edin. (1880) who died in 1915. Applicant was left with her brother and sister to educate. She has struggled to do this by letting and by clerical work. Her salary has been reduced to £2 a week, and letting brought in £52. Rent and rates come to £73 per annum. Applicant asks for help for the fees which are owing for her brother, who is in his last term at school, and for assistance to get him a post in a bank. His ambition is to be a doctor or articled to a solicitor. Her sister also requires some work. Voted £20 and referred to the Guild for further inquiries.

Wife of M.B. who has been in an asylum for the last four and a quarter years. The charges for him have been reduced to £58 a year, and his sister defrays half of this. The applicant's income is about £27 per annum. Her son, aged 16, is a junior clerk at £36 a year. Voted £18 in twelve monthly instalments.

Daughter, aged 69, of M.D.Edin. (1840) who died in 1881. The applicant, though deaf, has managed to support herself. Her only income is £60 from the "Dull" Fund, which she obtained in 1910. Voted £12 in twelve monthly instalments.

Subscriptions may be sent to the Honorary Treasurer, Sir Charters Symonds, K.B.E., C.B., M.S., at 11, Chandos Street, Cavendish Square, London, W.1.

The Royal Medical Benevolent Fund Guild still receives many applications for clothing, especially for coats and skirts for ladies and girls holding secretarial posts, and suits for working boys. The Guild appeals for second-hand clothes and household articles. The gifts should be sent to the Secretary of the Guild, 58, Great Marlborough Street, W.1.

British Medical Journal.

SATURDAY, JUNE 20TH, 1925.

GLANDULAR THERAPY.

THE discovery of the manner in which the ductless glands control the activities of the body is perhaps the most striking advance which physiology has made in the last half-century; but unfortunately the study of the physiology of these glands is beset with extraordinary difficulties, and every advance in scientific knowledge has been slowly and hardly won. Physicians, however, have been impatient of this halting progress and have made bold raids into the unknown far in advance of the consolidated positions, and the present result is that all sorts of therapeutic claims are being made which not only lack any support from controlled experiments, but in many cases actually are opposed to such facts as have been established.

The evils of this situation have been exaggerated by commercial interests, which have recognized a rich and easily exploited field. Every registered practitioner is, in consequence, deluged with literature giving lists of extracts of every organ of the body, and making sweeping therapeutic claims in respect of every one. Modern medicine is, indeed, threatened with a reversion to mediaeval magic disguised under a pseudo-scientific terminology. Not long ago the *Journal of the American Medical Association* published a series of articles each containing short and simple summaries of what is really known regarding glandular therapy, thus providing the medical practitioner with a standard by which he can judge the truth of the commercial literature.

The articles, which were prepared under the auspices of the Council on Pharmacy and Chemistry of the American Medical Association, have been reprinted in a small volume.[1] Three or four articles are devoted to each of the more important organs of internal secretion. There are twenty-two articles, all by different authors, and the list of contributors includes the names of many of the best known American authorities on the physiology of ductless glands and on glandular therapy. The articles set forth briefly such outstanding facts as have been established with reasonable certainty. The volume is of special value because at present the practice of glandular therapy is in rather an exceptional and doubtful position, for therapeutic practice has completely outrun established scientific fact.

The articles on the pancreas, thyroid, and suprarenal glands are excellent summaries of our present knowledge of these subjects, and as this knowledge is relatively advanced these articles contain fewer controversial statements than those in the second half of the volume, which deal with the pituitary, parathyroid, ovarian, and mammary glands. The writers on these latter subjects adopt an attitude of great caution. For example, Dr. Miller, who deals with pituitary gland therapy, is evidently doubtful whether extracts of the anterior lobe, when given by the mouth, have been proved to produce any certain therapeutic effects; and Dr. McCann is even more sceptical regarding parathyroid preparations, for in concluding his article he expresses the opinion that "there is no single condition for which the use of parathyroid therapy rests on a firm foundation of scientific proof except the use of autotransplants in tetania parathyreopriva." Dr. Novak, in his article on ovarian therapy, is almost equally cautious, for his main conclusion is "that, rational as ovarian therapy appears to be in some conditions, the results are rarely striking and often *nil* to the level-headed observer. It cannot be assumed that a commercial extract can replace the normal ovarian secretion in the patient's body, or, for that matter, that it originally contains any of the active hormones of the ovary."

These quotations show that the articles are written in a spirit of healthy scepticism. Since the subject is contentious, most people will not agree with every conclusion, but the series as a whole represents very fairly the present attitude to glandular therapy of the majority of laboratory workers and critical clinicians. It will be found very useful by all those medical practitioners who are interested in glandular therapy, but who are not content to take commercial advertisements as their chief authority in therapeutics.

[1] *Glandular Therapy.* A series of articles prepared under the auspices of the Council on Pharmacy and Chemistry of the American Medical Association. Chicago: American Medical Association. 1925. (Small 8vo, p. 89; 3 illustrations.)

SCARLET FEVER.

IN many different laboratories the new views on scarlet fever expounded by the Drs. Dick are being studied critically, and two medical men in Moscow have reported experiments on this subject conducted in Russia.[1] Their paper does not carry the question into any new territory, but it has an interest as a further confirmation of the Dick thesis. To some slight extent the Russian results differ from the American, but only in small matters of detail. Thus in Moscow the Dick reactions on healthy people gave a higher percentage of positive results than has been noted elsewhere. The Russian observers state also that persons who had formerly been ill with scarlet fever sometimes gave a positive Dick reaction on being retested.

Drs. George and Gladys Dick have published another article, entitled "Results with the skin test for susceptibility to scarlet fever: preventive immunization with scarlet fever toxin."[2] The first part of this paper contains a detailed account of the preparation and standardization of the toxin, both for skin tests and preventive immunization. The technical details here recorded should prove very useful to laboratory workers. There follow some observations on pseudo-reactions and different types of skin reactions, advice which will assist the interpretation of difficult or uncertain appearances. It is in the third section of this paper that the authors include the latest of their researches, concerned with active immunization by scarlet fever toxin. Here they have something fresh to say.

Scarlet fever toxin when injected subcutaneously is less injurious than diphtheria toxin, therefore it is not necessary to add antitoxin or to decrease the toxicity by chemical modification in order to employ it in amounts large enough to immunize. To ensure success preventive immunization with scarlet fever toxin must be carried to the point of a negative skin test, and the authors state that "if properly graduated doses are given at intervals of five to seven days, it is possible to immunize all susceptible persons to the point of a negative skin reaction without undesirable results."

[1] *Journ. Amer. Med. Assoc.*, May 16th, 1925, p. 1476.
[2] Ibid., p. 1477

It seems that previous investigators have not given sufficiently large doses of toxin in preventive immunization. Thus, the New York City Health Department, which has employed scarlet fever toxin in preventive immunization on a large scale, has given doses too small completely to immunize the majority of susceptible individuals. Toxin, put up in inadequate doses, is also being widely distributed by commercial firms. Judging from the figures reported by the Dicks, the conclusion may be drawn that the average susceptible individual is not completely immunized until he has received a quantity of toxin equivalent to about 10,000 skin test doses of the phenolized toxin. The first dose should be about 500 skin test doses, the second of 1,500 skin test doses, after which larger quantities may be given without any undesirable reactions.

The active immunity produced by injections of graduated doses of scarlet fever toxin is acquired fairly quickly. Retests after immunizing doses of scarlet fever toxin, made at intervals of three days to a year in a series of 1,634 susceptible persons, showed that immunity commenced to show itself in one to two weeks. To determine how long the immunity lasts after adequate treatment with scarlet fever toxin, groups of persons with positive skin reactions were immunized to the point of completely negative reactions and retested at intervals of three months, six months, one year, and one and a half years. In each case the results were negative, proving that active immunity lasts at least a year and a half.

BRISTOL AND OXFORD.

WITH the Royal opening of the new buildings of Bristol University fresh in mind,[1] it is of interest to recall that in 1449 Gilbert Kymer, who had been rector of the Faculty of Physicians in London when the attempt to set up a conjoint college of physicians and surgeons (1423) failed, admitted, in his capacity as Chancellor of the University of Oxford, a certain John Free of Balliol College to the degree of B.A. Free became a Fellow of his college, and presently went to Bristol as rector of St. Michael's Church. But the revival of learning in Italy attracted him, so that with three or four friends he took passage in an Italian ship from Bristol, studied at the Universities of Ferrara, Florence, and Padua, and settled as a teacher of medicine in the first named. Leland credits John Free and his friends with being the advance guard of Englishmen who visited Italy at the renaissance of letters: "primus Anglorum erat, qui propulso barbarie, patriam honesto labore bonis literis restituit." His honest labour made little impression on the city from which he sailed, and higher learning met with small encouragement in Bristol, though schools have flourished down to present times whose pious founders were contemporary with John Free. University College, Bristol, was founded in 1877, and in 1909 King Edward VII granted a charter whereby the University College and the Merchant Venturers' Technical College were fused into a new university. There had been talk of this possibility for some years, but the men who ventured to imagine such an enterprise were regarded as foolish visionaries. Oxford, however, sent its new Regius Professor, Sir William Osler, in 1905 to support unexpectedly these visionaries. Osler, distributing the prizes to the students of the Faculty of Medicine, made the remark in his address that Bristol was the only medical school in Great Britain not in connexion with a university. The question was whether Bristol people had risen to the importance of founding a university with which this medical school could be incorporated. There could be no question about the advantages to be derived from such a course, and he alluded to the remarkable growth of the medical schools in Manchester and other large centres. There were three essentials to the carrying out of such a scheme—capital, men, and buildings. When they had secured the capital they should not encroach too much upon it for buildings. They should then look for the men, for if the men were worth much it did not matter a great deal about the buildings. There were four kinds of university—first, those which had buildings but neither men nor money; second, those with men, but precious little money, and these often did the very best work; third, those with money and no men; and fourth, those like the one which they might establish in Bristol—a university with buildings, money, and men, which would be worthy of the Empire. Osler's address made a great impression, and his influence must be counted as a considerable factor in getting the university started. At the special congregation held at Bristol University last week, the Vice-Chancellor said that the University of Oxford, which had been closely associated with the university movement in Bristol, proposed to confer an honorary degree on Sir George Wills, joint donor of the magnificent new buildings; and a Latin address of congratulation and good wishes from the University of Oxford was read by Mr. W. W. Ward.

[1] BRITISH MEDICAL JOURNAL, June 13th, p. 1098.

OCCUPATION THERAPY IN MENTAL DISORDER.

IN his annual report for 1924 Dr. D. K. Henderson, the physician-superintendent of the Glasgow Royal Asylum, again draws attention to the fact that the number of voluntary admissions is approximately half the total admission rate. Naturally he regards this as a satisfactory condition of affairs, since it must mean that gradually the laity are beginning to have more confidence in mental hospitals. The public, he finds, are interesting themselves more in mental hospitals, and, irrespective of alarmist accounts, the distrust and suspicion which has been so prevalent is gradually being dissipated. This, he believes, is largely due to the fact that the relatives of patients, and the majority of patients themselves, realize that their treatment is kindly and considerate, and that everything possible is being done to promote recovery and betterment. Dr. Henderson points out that the institutional treatment of mental cases is by no means the largest part, and he considers that the problem of the care of the mentally ill should be viewed largely as a public health question, which can only be satisfactorily met by co-operation between the medical profession and the public. He refers to the fact that tuberculosis and other physical conditions have only been coped with by campaigns directed to the education of the people in regard to the causes of these diseases and in regard to personal hygiene, and he suggests that, though the problem of the mental health of the community is more difficult, it must be dealt with in the same way. Since a considerable proportion of the cases admitted into the hospital have shown mental symptoms for over a year, he regards it as essential that members of the medical profession should educate the public to seek earlier treatment and to assist in dissipating the idea that it is a family disgrace should one of its members be treated in a mental hospital. The existing overcrowding in mental hospitals Dr. Henderson thinks should be met, not by indefinite extension of the accommodation, but by attempting to devise better means for dealing with early cases and convalescents. He is of the opinion that mental hospitals have never sufficiently appreciated the importance of developing out-patient departments and of organizing social service and home care to a greater degree than has yet been attempted in this country. The account he gives of this work in connexion with the Western Infirmary is interesting, and

indicates that much useful work is being done, especially by preventing mental illness from developing further, or sometimes by effecting a permanent betterment. The report draws attention, as in previous years, to the importance of the development of organized occupational therapeutic work. The Glasgow Royal Asylum now has two pavilions under skilled instructors, whose sole interest it is to occupy groups of patients. It is found that the value of this work is reflected in the general atmosphere of the hospital—the wards have been quieter and the patients better conducted. A series of papers by Dr. Henderson, Dr. A. G. W. Thomson, senior assistant physician of the hospital, Miss Brodie, lady superintendent, and Miss D. Robertson, instructress in the occupational department respectively, dealing with various aspects of this important work was published in the *Journal of Mental Science* last January. There can be no doubt that occupation therapy is one of the most important means of interesting the chronic patients in external affairs and in preventing them from sinking into regressive fantasies and general dilapidation. The ultimate aim of occupation therapy is not merely to interest the patients in modes of activity which are of no real value; it is to start them on work in the schoolroom, as it were, with the idea that they may in time gain a pleasure in useful work and become serviceable social units in the asylum community. In many cases, of course, to arouse interest in work is the first stimulus towards recovery.

THE NERVOUS FACTOR IN THE PRODUCTION OF CANCER.

ALTHOUGH it may be said that we know nothing certain at present of the cause of cancer, a considerable amount of knowledge has been accumulated regarding the conditions favouring its appearance in the body. Among these the influence of the nervous system has so far received comparatively little attention. In papers published in this JOURNAL in 1903 and 1908, Lenthal Cheatle suggested that a definite relation existed between the incidence and spread of cancer and the innervation of the area involved, and he was able to adduce some striking clinical evidence in support of his theory. Cases recorded by him, in which an extensive rodent carcinoma was sharply restricted in its spread by an adjacent anaesthetic area of skin, are particularly striking in this connexion; and if the modern trend of opinion is correct, that the essential feature in cancer will be found to be a derangement of cellular metabolism, it is not improbable that the nervous system plays a part in the production of the disease. The subject has recently been taken up experimentally by Cramer.[1] His experiments, conducted in the laboratories of the Imperial Cancer Research Fund, London, deal exclusively with the production as distinguished from the spread of the disease, and it is clear that this distinction should constantly be borne in mind. The conclusion he deduces from his experiments is that, although cancer may arise in an area of skin which has been deprived of its nerve supply, the denervation does not induce a predisposition to the disease. This definite result does not, however, exhaust the problem of nervous influence, and Cramer points out that the chronic inflammatory irritation that so frequently constitutes a predisposing factor in the production of cancer is itself dependent on the integrity of the local nervous mechanism. Indirectly, therefore, nervous influence must be regarded as being of great importance in the production of cancer. The experiments referred to were made on mice. A piece of skin on the middle of the back, about 2 cm. long and 1½ cm. broad, was severed from the surrounding skin and from the underlying tissues, and sewn on again with fine catgut so as to form an autoplast completely freed from nervous control. In some of the animals the severance was complete, in some the skin was left attached by a bridge of tissue 3 to 4 mm. broad. After complete healing the centre of the detached skin was painted with tar twice weekly, and, as a control, also the normal skin on the neck. At the end of nine months twelve of the surviving mice had developed tumours, and of these all had tumours on the normal area but only five on the operated area. Of the latter only one mouse developed a tumour on the operated area previous to showing one on the normal skin. Clearly, then, the operation had not induced any predisposition to the disease. In three of the cases the tumour appeared very late on the denervated skin (after more than seventy paintings), and it appeared probable, from the results of Meeks's observations on the regeneration of nerve plexuses, that nervous control had been re-established in these cases. If these three cases are excluded from consideration it appears that of nine mice, all of which developed tumours on the normal skin, only two showed growths on the autoplasts. An additional observation of interest was made with regard to the characters of the resulting tumours, those on the normal skin exhibiting a much more decidedly infiltrating character than those on the operated area.

[1] *Brit. Journ. Exper. Med.*, vol. vi, p. 71.

SPIROCHAETOSIS RIVERENSIS.

NEW diseases in place of old always attract attention and excite critical consideration; syphilis and yaws have in the past been confused, and South America has several diseases of which we know little and have no experience. As the result of many years' work Dr. Louis A. Micheloni[1] of Montevideo, Uruguay, now describes for the first time a serious disease of spirochaetal origin which occurs in the department of Rivera (hence its name) and in the southern part of Rio Grande, Brazil. It is regarded as a transitional infection standing between syphilis and trypanosomiasis (gambiensis), and is a chronic meningitis which, while not proving immediately fatal, impairs health and leads to death by some intercurrent disease. Spontaneous cure, however, may occur in children and during adolescence, but is rare in adults. The spirochaete resembles *Spirochaeta refringens*, but is thicker and shows more active movement than the *Spironema pallidum*, and is found in the cerebrospinal fluid but not in the blood. The Wassermann reaction is usually positive, but salvarsan and mercury fail to do good and may even do positive harm. It is usually conveyed along with gonorrhoea, and Dr. Micheloni believes that 75 per cent. of the whole population in Rio Grande are infected with the *Spirochaeta riverensis*. While gonorrhoeal pus does not contain the spirochaete, elongated nucleated cells, which may be a transient phase of the spirochaete, are found in it. The ocular symptoms are peculiar, and are thought to be pathognomonic; the spirochaetes are present in large numbers in the anterior chamber of the eye, and can be seen by the infected person; when looking at the sky, in a sort of dreamy way, the patient sees hundreds of thousands, possibly millions, of shining bodies moving quickly before his gaze. The two other cardinal symptoms are tinnitus and cardiac palpitation. The patients are extremely susceptible to ether and chloroform, and sudden death sometimes occurs after exertion; intercurrent infections, such as influenza, are likely to be severe. Dr. Micheloni suggests that patients infected with this spirochaete are thereby protected against carcinoma, but this appears to be no more than a surmise based on the rarity of malignant disease in the areas where spirochaetosis riverensis is prevalent.

[1] Micheloni, L. A.: *New York Med. Journ. and Record*, 1925, cxxi, 593.

CENTENARY OF FARADAY'S DISCOVERY OF BENZENE.

THE centenary of the discovery of benzene by Faraday was celebrated at the Royal Institution, where he was professor, on Tuesday last, by the Royal Society, the Chemical Society, the Society of Chemical Industry, and the Association of British Chemical Manufacturers. Faraday himself seems to have attached little importance to the discovery, and turned away to the study of electricity, but his observations were the foundation of the synthetic chemical industry. In the morning a reception was held in the Institution, when a number of relics of Faraday were exhibited, and the President, the Duke of Northumberland, gave an address. He was followed by Professor H. E. Armstrong, and afterwards a number of British and foreign delegates spoke in praise of Faraday. Afterwards Lord Balfour made a speech, in the course of which he said that almost all, if not absolutely all, the most striking developments in the world of industrial production and scientific speculation were associated with the name of Faraday and intimately connected with his discoveries. In the world of practice and in the world of theory Faraday was one of the greatest builders the world had ever seen, but it would be a mistake to exaggerate the immediate effect of those discoveries. A generation had to pass before the first step was taken to turn the discovery of benzene into the commencement of the great dye industry. Neither statesmen nor men of business had taken all they could from the actual knowledge science had already acquired. The new discoveries made daily in all countries could not be expected to produce an immediate result to be measured either in human convenience or in commercial dividends. In the evening a banquet was given in the hall of the Goldsmiths' Company, when the Duke of Northumberland presided over a representative gathering of British and foreign chemists. The toast of "Chemical science and industrial art" was given by Sir Alfred Mond and acknowledged by Sir James Irvine, Vice-Chancellor of St. Andrews University, Professor Norris, president of the American Chemical Society, and Dr. E. F. Armstrong, the newly appointed managing director of the British Dyestuffs Corporation, Ltd. Professor H. E. Armstrong, in proposing "Our court of assistants," said that one of the chief was benzene itself. The toast was acknowledged by M. Paul Kestner, Professor Cohen, Professor Katayama, Mr. Milne Watson, and Lord Blanesburgh. The Institution has founded a medal, to be awarded perhaps every six years, without regard to nationality, for an outstanding achievement in some clear relation to Faraday's discovery of benzene. The first award was made to Mr. James Morland of Carlisle and Grangemouth in recognition of the signal service he has rendered to chemical science and industry in this country during the last ten years by developing the manufacture of anthracene dyestuffs, and, more recently, by extending their application to silk and wool.

PEMPHIGUS NEONATORUM.

OUTBREAKS of pemphigus neonatorum have recently occurred in connexion with maternity homes in this country, and to remind medical men of the chief features of this rare disease the Ministry of Health has issued a memorandum.[1] It is a highly contagious disease, and is characterized by the development of bullae or blebs which rupture and heal without a scar. They first appear as small pink spots resembling flea-bites; the spot enlarges, the overlying skin becomes pale and wrinkled, and fluid collects below until a blister half an inch to an inch in diameter has developed; when the covering layer bursts it exposes a round red moist surface surrounded by a bright pink border. Other bullae may arise, coalesce, and when they burst leave an irregular raw surface. Pemphigus neonatorum is considered by many to be a variant of impetigo contagiosa, its special character being due to the peculiar nature of the infant's skin. Mild and grave varieties have been distinguished in different outbreaks. No severe illness accompanies the mild cases, which end uneventfully in a few weeks, whereas in grave cases extensive eruptions appear all over the body, attended by fever and signs of toxaemia. Such grave cases are often rapidly fatal from pulmonary oedema. Different types of germs have been accused of causing this disease, but no unanimity exists as to the exact nature of the infecting agent. But whatever type of microbe this may be, there is little doubt that the disease is spread by contact with infected material, and that the portal of entry is usually some slight lesion of the skin. Thus, the first bleb often appears at some point of pressure, or where two surfaces of the skin are in close apposition—for example, in the folds of the neck, axillae, groins, and flexures of the limbs. General infection may occur through the unhealed umbilicus, resulting in the early appearance of toxaemic symptoms. In the majority of outbreaks the attendant midwife is the original source of the infection and agent of its spread. Less often the mother or nurse has been discovered to be suffering from the common forms of impetigo or from whitlow. It is advised that the vesicles should be opened, drained, the edges exposed, and the base freely anointed with 2 per cent. ammoniated mercury ointment. Warm baths of weak potassium permanganate solution are said to be useful. The control and prevention of pemphigus neonatorum can only be successful when its highly infectious nature is understood. Nurses or midwives suspected of carrying the infection should be suspended from duty until they have been thoroughly examined and their equipment and apparel effectively disinfected. But the first requirement is early diagnosis of cases, which the Chief Medical Officer of the Ministry asks should be immediately reported to the local supervising authority, in order that prompt inquiry may be made to discover the person who is responsible, and the manner in which infection is being contracted.

[1] Ministry of Health, Memo. 103 Med. To be purchased directly from H.M. Stationery Office or through any bookseller. 1925. 1d. net.

A RADIOLOGICAL METHOD OF INVESTIGATING HEART MOVEMENT.

AT the meeting of the Röntgen Society on June 9th Dr. Robert Knox described certain work which has been proceeding in the radiological department of the Cancer Hospital on the investigation of the movements of the heart by the use of x rays with a slit diaphragm and a moving film. Attention was first drawn to this method of examination by Reider and Rosenthal of Munich in 1912, and by Crane in America in 1916; after this the subject seems to have been allowed to lapse for several years, until the opportunity came to Dr. Knox to investigate it further. The patient stands with his chest in front of the tube-box, which has a lead shield with a horizontal slit in the middle of it, and the film is placed in a moving cassette which travels slowly in a vertical direction past this slit so that upon the film there is exposed a continuous image of the moving edge of the heart. As a result of many experiments it has been found that the best records are obtained with eight seconds of total exposure, the film moving about sixteen inches during this time. The positions are so arranged that the edge of the slit to the left projects clear beyond the heart's shadow, or, if the horizontal slit is wide enough to cover the transverse chambers of the heart, the movements of both the left and the right edges may be presented. The resulting image on the film resembles in many points of detail the tracing obtained by the use of the electro-cardiograph. Practically all that the electro-cardiogram shows can be demonstrated by the x-ray record

of the heart if a full examination is made of all its borders, and the *x*-ray record has advantages over the electro-cardiogram in that it is a faithful record of the actual movements of the pulsating heart. The film shows a number of outlines which are difficult to interpret; for some time it was not recognized that there were what might be described as primary and secondary lines. The former, which are very pronounced, are obviously the records of the movements of the left ventricle and the right auricle, the ventricular movements, if examined carefully, giving all the information afforded by the electro-cardiogram and the pulse tracing, and other information in addition. The secondary lines are more obvious on the left side, where the movement is greater. One wavy line occurs at the point of maximum expansion of the heart in diastole, where the heart edge impinges upon the pericardium, pleura, and adjoining lung substance. Other lines on the right side are similarly caused by the transmitted impulses of heart movement upon a buttress of tissue. By the use of this method it is possible to measure accurately the transverse diameter of the heart in any of the levels of the cardiac shadow, and to obtain information regarding the movements of the various chambers. In aneurysm of the aorta the method has proved useful for investigating the size of the aneurysm transversely and the character of its pulsation, whether true or transmitted to other structures in its vicinity. It is believed that a comparison of the various measurements will be of the utmost importance in the investigation of cardiac diseases. The degree of dilatation can be estimated, and also the ability of the heart muscle to deal with the dilatation. The transverse width of the heart can be estimated readily by direct measurement from the tracing if the record of both edges of the heart is on the film, the width of the organ in systole and diastole is equally well ascertainable, and the difference between the two gives a rough estimate of the tone of the heart and its contractile power. It is intended to use the apparatus in the investigation of the movements of the normal aorta, to establish, if possible, the normal range of pulsation of its structure, and to apply the knowledge so obtained to the pulsation in aneurysm of the aorta. Possibly the apparatus may also be used for the investigation of other forms of movement—diaphragm, stomach, duodenum, and colon. One of the chief difficulties has been the inadequacy of the *x*-ray apparatus to give a record on the film through a thick subject because of the shortness of the exposure. This difficulty has been overcome to some extent by selecting thin patients, in whom it has been possible to get a faint record of the moving edge of the heart; but more powerful apparatus is required, and the possession of two or more times the intensity of the moderate power available would permit of the radiography of thick subjects at a distance of two metres. Work done at this distance, in Dr. Knox's opinion, would soon place the apparatus on a sound footing for clinical research.

EPIDEMIOLOGICAL BUREAU AT SINGAPORE.

In February the Far Eastern Epidemiological Bureau and Information Section of the League of Nations was opened at Singapore. A conference was held from February 4th to 13th, which was attended by delegates from twelve Far Eastern administrations. Arrangements were made for the operation of the bureau, the collection and transmission of epidemiological information to the Governments concerned and to Geneva, and for co-operation between the Governments concerned. The Government of French Indo-China has agreed to broadcast from the Saigon wireless station the epidemiological bulletins of the bureau once a week throughout the East, and to transmit them to Europe. Subject to final approval of the Governments concerned, the conference decided that the first appearance in any part of Asia or Australia of cholera, plague, small-pox, yellow fever, or the unusual prevalence of any other infectious disease, should be reported to the bureau immediately; and that a weekly bulletin should be dispatched giving the mortality from plague, cholera, or small-pox, indicating the existence of plague infection among rats, and giving notes of any unusual epidemics. Weekly letters would also be forwarded giving supplementary information to the bureau, which would telegraph to all Far Eastern Governments and the head office at Geneva a weekly summary of all this information; monthly and annual publications would be issued later by the bureau. Any of the Governments concerned could obtain from the bureau at any time special information required. The weekly telegrams sent by the bureau will be cabled to Saigon and sent out by broadcast each Thursday, a special wireless message being sent to France and transmitted by telephone to the Central Epidemiological Service at Geneva. It was suggested that some form of advisory council should be established, including representatives of the countries concerned. The Rockefeller Foundation has offered a total sum of $125,000 for five years on the understanding that if the bureau proves its value by the time this sum is exhausted, the Governments concerned will take the necessary steps to keep it in existence. The Singapore conference reported that it would be necessary to augment this contribution at no distant date. The representatives of Siam and the Straits Settlements stated that their Governments were willing to bear a reasonable share of the expenses of the bureau, and similar support was indicated from other countries. Dr. Gilbert Brooke, of the Straits Settlements Medical Service, has been appointed director of the bureau, and the first bulletin was broadcast on April 4th.

MEDICAL SCHOOL ORGANIZATION IN AMERICA.

DR. A. L. HOOPS, principal civil medical officer of the Straits Settlements, paid a three weeks' visit to the United States last year as the guest of the Rockefeller Foundation. He evidently made no holiday of his visit, unless change of occupation be regarded as a holiday, and even so, what he inquired into and learned related wholly to medical and public health questions. The outcome is a pamphlet in which he gives notes of what he observed in various places regarding various matters. These visits to American medical schools furnish information which could, no doubt, be extracted from official publications, but is conveniently condensed in his pamphlet. There are now about eighty such schools in the States, mostly connected with universities. The differences between the best and the worst of them are more marked than in the leading European countries, but Dr. Hoops points out that their degrees alone are insufficient to obtain a State licence for practice, a State examination being also required. He visited two of the best—Johns Hopkins and Harvard. A few schools require that a student shall have taken a degree in arts or science after four years at college before admission to the medical course. Others need only two years. These pre-matriculation studies are devoted to physics, chemistry, biology, and modern languages—French and German. A student is usually over 21 years of age when he applies for entrance to a medical school, and applicants are so numerous that the best schools have a wide choice. The minimum curriculum is four years, and some schools require five. Towards the end of the second year the elements of physical examination and diagnosis are taught in the out-patient department. The third and fourth years are wholly clinical, and after passing the M.D. (not M.B.) examination at the end of the fourth year, about three-fourths of the graduates obtain resident intern appointments in hospitals. At this time the State board examination is usually taken, and failure is the exception. The

intern residence is for twelve to twenty-four months, and the best of the men may stay on for two to five years longer, with free residence and perhaps a small salary, on condition that they devote themselves to intensive study in some special field of medicine. The American medical curriculum has recently been revised in the direction of shortening, the Harvard course being now 900 hours a year instead of 1,300. In preventive medicine and hygiene at Harvard great stress is laid on field work. Each student is required to make a sanitary survey of a city or town. The report consists of: (*a*) data; (*b*) interpretation of the facts; and (*c*) criticisms and recommendations. The survey includes history, geography, topography, climate, geology, population, health organization, water supply, sewage disposal, refuse removal, vital statistics, milk supply, nuisances, industrial hygiene, housing, infectious diseases, schools, markets, slaughterhouses, cold storage plant, educational pamphlets, diagnostic laboratory, meat inspection, district nursing, city planning, food and drug administration, etc. We do not observe any statement as to how long this survey, with its reports, usually lasts. Dr. Hoops also visited three hospitals—Johns Hopkins, Mount Sinai in New York, and a hospital in Boston. At the first named, disease prevention is taught in all the out-patient departments along with the curative work. Patients who can pay are charged anything up to 17.50 dollars a day, the cost being at least double this. The professorial staff are all whole-time officers, and their salaries are paid by the university, not by the hospital. Many other details are given in Dr. Hoops's interesting record of his visits. One conclusion is that in the matter of hustling he has not had much to learn from his hosts in his three weeks' tour.

MOSQUITO CONTROL.

IN many localities in England and Wales happiness in summer weather, when we have any, is diminished by the mosquito. Even in the immediate neighbourhood of London there are pleasure haunts a visit to which is made memorable for the succeeding days by an almost uncontrollable impulse to scratch. The popularity of several delightfully situated seaside resorts also has been endangered by the mosquito or its congeners, until the local authorities have taken steps to abate the nuisance, unfortunately not always in the right direction, as was made clear in some notes on mosquito control communicated recently to the Portsmouth Literary and Philosophical Society by Mr. G. F. Marshall, Director of the Mosquito Control Laboratory, Hayling Island, Hants, who is known to some of our readers on account of the demonstration he gave to members of the British Medical Association during the Portsmouth meeting in 1923. We have in previous years published accounts of the progress of the campaign instituted on Hayling Island, and Mr. Marshall has now given a useful account of the various measures which may be taken in this country to control the mosquito pest. Mr. Marshall sums up the points for and against such different methods as surface oiling, the use of larvicides, and the abolition of mosquito breeding places by appropriate engineering methods. Naturally, no water should be treated with larvicide unless the presence of larvae has actually been observed, and in organizing a mosquito control campaign in any district the first step is to ascertain which species are prevalent in the neighbourhood, and then to estimate their relative importance as nuisance producers, so that those which are causing the greatest annoyance shall be the primary objects of attack. We notice that the Mosquito Control Laboratory at Hayling Island is offering a service, which will be of great value, by promising to examine and report free of charge upon all specimens of mosquito larvae and adult mosquitos forwarded by post.

"PROTOZOOLOGY."

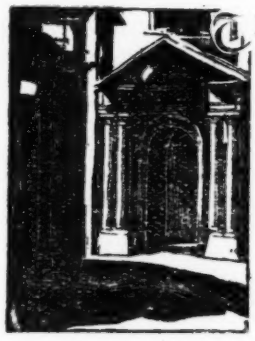
UNTIL very recent times the animal parasites were not only much neglected both in the teaching of medicine and in medical literature, but periodicals devoted to their study were few. A little over two years ago we welcomed the appearance of the *Journal of Helminthology*, under the editorship of Professor R. T. Leiper, F.R.S., of the London School of Tropical Medicine, and director of the Institute of Agricultural Parasitology. We now have the pleasure of welcoming *Protozoology*, which is being issued under the same auspices. Hitherto no English journal has been exclusively devoted to this subject—a subject which includes the parasites of so many important diseases, including malaria, sleeping sickness, kala-azar, amoebic dysentery, and probably many others not yet fully understood. The Institute of Agricultural Parasitology has for its aim the solution of the many parasitic problems affecting animals and plants, and also, directly and indirectly, man. The new journal is intended primarily to provide a means of publication of original communications on the parasitic protozoa observed during the course of the work of the Institute. It is intended at present to issue *Protozoology* in separate numbers when required as a supplement to the *Journal of Helminthology*. The first number contains an article by Dr. J. G. Thomson on a Giardia found as a parasite of a parasitic nematode, and articles by Miss M. Triffett on Gastrocystis—a common parasite of sheep in Britain—and on various Coccidia found in reptiles at the London Zoological Gardens. The illustrations are in line and half-tone. The new journal is a distinctly valuable contribution to the sciences of protozoology and parasitology, and we hope that the occasions for its appearance will frequently arise.

A TOWN-PLANNING JOURNAL.

SPECIALIZATION in modern activities leads to specialization in journalism, some of it ephemeral, some persistent. Of the latter type is the monthly magazine, *Garden Cities and Town Planning*, which is now half through its fifteenth year of publication, and is well written, well printed, and well illustrated. Its issue for June (a copy of which the secretary has sent us owing to the interest excited by the leading article on suburbanization published in our issue of May 30th) contains an article descriptive of no fewer than eight of the special constructive systems of house building which have been devised to meet the urgent national need for more and better dwellings at a time when the building industry is so short of labour that ordinary brick and stone houses cannot be supplied in anything like sufficient numbers. The way in which the brick and stone syndicalists are using their powers of obstruction is one of the most deplorable facts in the social life of the present day. That, however, is merely an aside, called forth by one of the articles in the magazine under notice. Other contributions include an exposition of the scheme of a Public Utility Society at the Garden City of Welwyn; reviews of recent books on housing; and an interesting lesson in mass production showing "How we get our doors." The journal is the organ of the Garden Cities and Town Planning Association, whose headquarters are at 3, Gray's Inn Place, W.C.1.

A DETAILED announcement appears on the first page of the SUPPLEMENT this week giving further particulars of the arrangements made by the Reception Committee, and confirmed by the Council at its last meeting, for the opening by H.M. the King, who will be accompanied by the Queen, of the British Medical Association's New House in Tavistock Square, on Monday, July 13th, at 3 p.m.; and for the dedication by the Archbishop of Canterbury of the Gates of Honour, erected in memory of members of the Association who fell in the war.

NINETY-THIRD ANNUAL MEETING
of the
British Medical Association,
BATH, 1925.



Doorway of St. John's Hospital. (From a wood engraving by Horace Gerrard.)

THE ninety-third Annual Meeting of the British Medical Association will be held at Bath at the close of next month, under the presidency of Dr. F. G. Thomson, physician to the Royal United Hospital, Bath, and consulting physician to the Royal Mineral Water Hospital. The Annual Representative Meeting, for transaction of medico-political business and discussion of the internal affairs of the Association, will open at Bath on Friday, July 17th. The statutory Annual General Meeting will be held on the afternoon of Tuesday, July 21st, and on the evening of the same day the new President will deliver his Address to the Association. The twelve Sections, among which the scientific and clinical work of the meeting is being divided this year, will meet on the three following days. The list of Sections and sectional officers, together with the full provisional programme and time-table and announcements about hotel accommodation, etc., were published in the SUPPLEMENT to the BRITISH MEDICAL JOURNAL of June 13th, 1925. Further details of the arrangements will appear in later issues. On the last day of the meeting, Saturday, July 25th, there will be excursions to places of interest in the neighbouring West Country. We publish below the third of a series of descriptive and historical articles on Bath.

THE BATHS OF BATH.

BY
JOHN HATTON,
DIRECTOR OF THE HOT MINERAL BATHS.

THE Baths of Bath form what is probably the oldest curative establishment in the world. No less than eighteen and a half centuries have passed since the Romans founded their great Thermae, and from some time about the year A.D. 54, with scarcely an interruption, the hot springs of Bath have been used for the treatment of rheumatic diseases.

If, for a moment, we may leave the clear light of fact for the mists of legend, Bath's beginning as a place of healing is thrown back still another nine centuries, and the earliest patients are discovered to be a royal prince and a herd of swine. Taking into consideration the somewhat inadequate system of recording then in use, our earliest case record, remembering that its date is 863 B.C., is really remarkably complete.

Bladud, son of a British king, Lud Hudibras, becoming afflicted with leprosy, was banished from his father's court. Outcast, he secured the post of a swineherd in the Avon valley, only to transmit the disease to the swine. Dreading his employer's wrath, the prince drove the herd higher up the valley until they came to a hot swamp. Day after day the leprous pigs wallowed in the steaming morass, with the result that the disease entirely disappeared. The treatment having proved successful in the case of the swine, Bladud decided himself to try balneological measures, with equally happy results. Returning eventually to his home, cleansed of his leprosy, the outcast was welcomed and in due course succeeded to his father's throne. In later years he returned to the scene of his wonderful cure, there to found his capital, and, enclosing the springs, he built the first bathing establishment and the first city of Bath.

FIG. 1.—Roman Circular Bath. (From a wood engraving by Horace Gerrard.)

An interesting case, and a picturesque story, perhaps with more than a grain of truth in it; but the proximity of ancient ways and early settlements affords more reliable presumptive evidence of the pre-Roman use of the hot springs.

With the coming of the Romans we get on to surer ground, and in the wonderfully preserved remains of the Baths of Aquae Sulis the establishment of a definite system of balneology may clearly be seen.

Roman Bath was essentially a health resort. It was neither a military camp nor a city with a municipal charter, but a spa, drawing its patients chiefly from Britain—soldiers invalided from the garrison stationed in the island, a town councillor from Roman Gloucester—with an occasional visitor from the western parts of the Continent, from the places we now know as Trèves, Metz, and Chartres; no slight journey in those days, and an indication that the fame of the springs had become widely known.

THE ROMAN BATHS.

The Roman Bathing Establishment, dating in its earlier portion from about the middle of the first century, appears to have been extended or altered at least twice during the subsequent three hundred and fifty years of Roman rule. Evidence of this is clearly seen in the eastern portion of the Roman Baths, which has been excavated during the last

two years. Here later hypocausts have been superimposed on previous Roman work, which in its turn had been built on a filled-in bath of still earlier date. When this middle-period work was broken through last year the still perfect masonry of the oldest bath of all was seen again for the first time since it was covered in by the Romans themselves, probably in the second century. At the moment of writing this newly discovered Roman work is not open to the public, but it will be on view before the British Medical Association meeting in July.

Occupying a hall 110 ft. by 68 ft., the Great Bath, with a water surface of 82 ft. by 40 ft., formed the principal feature of the Roman Bathing Establishment. The original pavements, or scholae, surrounding it are in a good state of preservation, and considerable portions remain of the rectangular and semicircular recesses or exedrae, similar to those at Pompeii, three on each of the longer sides, evidently provided for the clothes of the bathers or for rest and retirement.

The large bath was also supplied with a jet of cold water to serve the purpose of a douche or to quench the thirst of the bathers, a long section of Roman pipe remaining *in situ*, which appears to have been used for the purpose of conveying cold spring water to the bath.

Covering the floor of the bath is the original Roman lead, laid in sheets 10 ft. by 5 ft. and weighing 40 lb. to the square foot. The lead was obtained from the Roman mines in the Mendip Hills, a few miles from Bath, while the buildings themselves were constructed of Bath stone, obtained from the hills in the immediate neighbourhood. The preservation of the Roman carvings is a testimony to the lasting properties of this famous building stone.

The well known Roman system of bathing—the preliminary hot chambers, forerunner of the Turkish bath, followed by bathing in the large baths, with subsequent massage and the use of unguents—could here be carried out in every detail. All the baths were supplied with water from the hot springs, and from their construction the several bathing pools, of which no fewer than six have been discovered, appear to have been used at different temperatures.

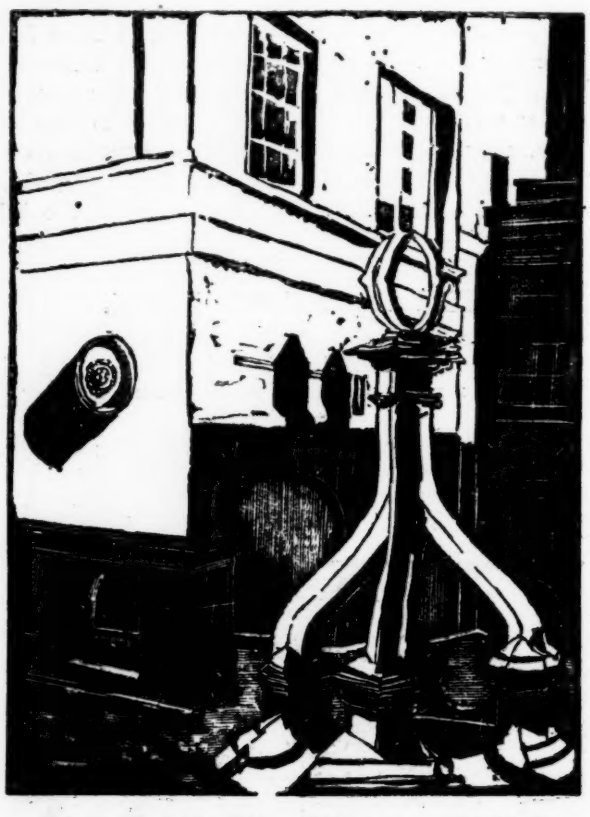


FIG. 2.—The King's Bath. (From a wood engraving by Horace Gerrard.)

A large circular bath, some smaller baths, and hypocausts or heating chambers, forming the system of hot-air baths, may also be seen, while, partly obscured by the foundations of the modern Queen's Baths, are other large baths indicating the vast extent of the Roman Bathing Establishment.

The recent excavations have resulted in discoveries of exceptional interest. Two large rectangular baths have been found, over which at later periods the Romans built hypocausts, the pilae of which still remain *in situ*. The apsidal ends of two sudatoria have also been found, one containing a portion of the original tessellated pavement supported on pilae, with the air-shaft intact whereby the heat was obtained from the furnace, which is still clearly visible.

The great culvert, built by the Romans for carrying off the waste water from the baths, has also been discovered, and, its masonry still sound and watertight, is now used for its original purpose, while under the King's Bath the waters of the King's Spring are still protected and enclosed by the Roman reservoir built in the first century to conserve the mineral water and prevent the admixture of any cold or surface water.

A small ante-chamber has just been built to enable visitors to see the head of the culvert and the Roman arch in the outer wall of the reservoir, and the steps which led to the dipping well whence the Romans drew the mineral water for drinking. Until this well was found it was always supposed that the Romans only used the waters externally, but the discovery of drinking cups in the bottom confirmed the view that from this well, supplied, as is the Pump Room to-day, with water from the King's Spring, the Romans obtained the mineral water for internal use. An inscription over the bronze doors of the ante-chamber records that—

"This Hot Spring used by the Romans has been from time immemorial the principal source of the health-giving waters of Bath."

THE BATHING ESTABLISHMENT TO-DAY.

As this article is not intended to be a disquisition on Roman remains, it is time to leave the ancient and visit some of the modern departments of the bathing establishment. These represent a capital value of well over £200,000, and constant improvements to meet the advance of knowledge, and (so far as the past few years are concerned) almost continuous additions, have produced an exceptionally well equipped balneological institution.

Three buildings in close proximity form the principal part of the bathing establishment. The Queen's Baths, adjoining the Grand Pump Room; the Royal Baths opened in 1916 by Field-Marshal the Earl of Ypres on his return from France—a graceful recognition of the action of the Bath Corporation in placing the facilities of the baths at the disposal of the army medical authorities (and it may be recorded that Bath had the privilege of giving no fewer than 226,889 treatments to men wounded and invalided in the great war); and the Old Royal Baths, at present undergoing reconstruction as a suite for Plombières douches and large pool treatment. The Bath Street wing of the Royal Baths was opened in 1919 by Dr. Christopher Addison, the first Minister of Health, and the electrotherapy department was added a couple of years later.

Let us for a moment follow a patient visiting Bath for "the cure." First he will come to the booking office in the entrance hall of the Royal Baths, and there presenting his doctor's prescription, arrange the times of the treatments and receive the appointment cards and the bath tickets, purchasing at the same time a visitor's ticket, which gives the entrée to the Pump Room and the gardens and admission to the concerts and entertainments—a kind of voluntary *kur-tax*.

Now he will go to one or other of the three main departments for his bath or other treatment. It may be a deep bath, the oldest and perhaps the most important form of treatment. Immersed in some five hundred gallons of the mineral water, freedom of movement is easy, and the undercurrent douche—a powerful jet of water usually at a higher temperature than the bath—can be applied to any part of the body. Patients too helpless even to walk down the steps are lowered into the water in chairs actuated by hydraulic power. Or he may be ordered the modified form of immersion in a reclining bath, or the more tonic procedure of the aeration bath.

When the stage is reached for something more vigorous perhaps some form of douche massage may be prescribed. Bath was the first spa to introduce the Aix douche into Britain many years ago, and the natural hot mineral water douche combined with massage and movements has ever since held a prominent place in the Bath system. There has been a great demand for both Aix and Vichy douche treatment; two of the Vichy douche suites are now being enlarged, and it is hoped, before the meeting of the

British Medical Association, to have an entirely new suite completed and ready for use.

Intestinal douching on the Plombières system was introduced some years ago, and successful results necessitated more and more accommodation. Now it has been decided to concentrate this treatment in one building, and the visitors in July will find the Old Royal Baths in the process of being reconstructed into a suite of Plombières baths, embodying the details of equipment which have proved successful at Bath, together with the experience of Continental spas.

The Old Royal Baths were designed by John Wood the younger in 1778, and in adapting them to modern requirements every care has been taken to retain Wood's ingenious planning and the many delightful old features that give the characteristic Bath flavour. In the centre of the block is a large pool supplied direct from the Hot Bath Spring which will be used for the treatment of spastic and flaccid paralysis by voluntary and controlled movements, which has been in successful use at Bath for some time.

The concentration of the Plombières douches into the Old Royal Baths will release some particularly good rooms in the Royal Baths for vapour treatment, now given on the lower floor of the Queen's Baths. In certain gouty conditions, and in some of the subacute and chronic forms of eczema, this treatment by the vapour from the mineral water is much used.

Sir William Ramsay's estimation of the exceptionally high radium content of the natural gases which are given off from the springs led to the installation of throat and nasal sprays in which the mineral water is atomized by these radio-active gases, and of means whereby the natural gas may be administered by inhalation. The gas is 96.4 per cent. nitrogen and 3.6 per cent. CO_2, and the nitrogen contains the rare gases argon, neon, and helium. The niton or radium emanation in the gas is equivalent to 33.65 milligrams of radium per million litres. The room for this treatment is in the Queen's Baths, directly overlooking the King's Spring, whence the water and gas are collected.

FIG. 3.—The Bath Street Colonnade of the Royal Baths. (From a wood engraving by Horace Gerrard.)

Many other methods are in use, but this article must not resolve itself into a mere list of treatments available at the baths; there will be many opportunities of seeing them all demonstrated during the third week of July. Brief mention, therefore, need only be made of the Department of Electrotherapy, where the usual light and heat treatments and the various hydro-electric methods are administered, and ionization, diathermy, high frequency, and other treatments are employed, usually in conjunction with the mineral water baths, which are often ordered only on alternate days. A useful addition—an ultra-violet ray room for general irradiation—was opened last month by Dr. Leonard Hill, F.R.S., director of the Physiological Department of the National Institute for Medical Research.[1] There is also one of the very few installations in this country of Zander machines for mechanotherapy.

There are two large swimming baths supplied with mineral water cooled to about 80° to 84° F., which afford an agreeable form of bathing for patients who have reached the convalescent stage and are ordered the full use of their limbs. And they fulfil the no less useful purpose of helping to keep in health those who resort to them for the exercise of swimming.

[1] BRITISH MEDICAL JOURNAL, May 23rd, 1925, p. 982.

The Pump Room and King's Bath.

The internal use of the waters is an important part of the "cure," and the Pump Room, where the waters are served for drinking, is the meeting-place of all who come to Bath. This handsome, well proportioned building, designed by Baldwin in 1796, bearing on the pediment the appropriate motto from Pindar, ΑΡΙΣΤΟΝ ΜΕΝ ΥΔΩΡ,[2] is a fine example of a great Georgian apartment. At one end is the musicians' gallery, and at the other a statue of Beau Nash by Hoare. Below is the famous Tompion clock to which Dickens alludes in the pages of *Pickwick*. It occupied a place in the first Pump Room, built in 1704 under the auspices of Nash, to whom the clock was given by its maker, Thomas Tompion, the most celebrated of all English horologists, in gratitude for benefits received from the Bath waters. Some of those, by the way, who motor from London to the Annual Meeting—which they can do without getting stuck in the "bottle-neck" of Brentford now that His Majesty has opened the great wide way to the West—may remember that it was this same Thomas Tompion who was called in to measure with accuracy and precision the famous Bath Road, which he found to be 107 miles from London to Bath.

To return to the Pump Room where Tompion's clock still ticks—there are some beautiful original settees of Chippendale period and a couple of sedan chairs, and several portraits of notables connected with Bath.

The concerts proper—the morning music in the Pump Room is really to stimulate conversation and enliven the process of drinking water, actually odourless and almost tasteless, but declared by Sam Weller to have "a strong flavour of warm flat-irons"—are held in the concert hall of the Roman Promenade, a building designed by Brydon in 1897 and forming part of the same block. Here the Pump Room orchestra plays from October to May, while from May to October the band performances are given in one or other of the parks and gardens. The Institution Gardens are quite near to the bathing establishment, and here during the summer season the waters are also served for drinking *en plein air*.

Perhaps the most interesting thing about the Pump Room is the view of the King's Bath from the large window on the south side. In the centre rises the King's Spring, the largest of the three hot springs supplying the baths and Pump Room. The others—the Cross Spring and the Hot Bath Spring—rise a short distance only away, within the precincts of the bathing establishment, the three yielding half a million gallons a day. The water rises at a temperature of 120° F., and in quantity and temperature the springs are entirely unaffected by climatic or seasonal changes.

In the eighteenth century the King's Bath was the fashionable bathing place, although when Pepys visited Bath in 1668 he "looked into the Baths, and found the

[2] Ἄριστον μεν ὕδωρ—

"Which means 'The pure Element
Is for Man's belly meant!'"

Ingoldsby Legends.

King's and Queen's full of a mixed sort of good and bad, and the Cross almost only for the gentry." The broad pencil of Rowlandson and other caricaturists found ample material in the mixed bathing of the Georgian period—the gentlemen in canvas waistcoats and drawers, the ladies' robes adorned with yellow ribbons. Floating on the water were little trays containing scents and sweetmeats for the delectation of the bathers, while their friends strolled on the broad paved promenade surrounding the bath, finding, with Christopher Anstey, that

> "'Twas a glorious sight to behold the fair sex
> All wading with gentlemen up to their necks."

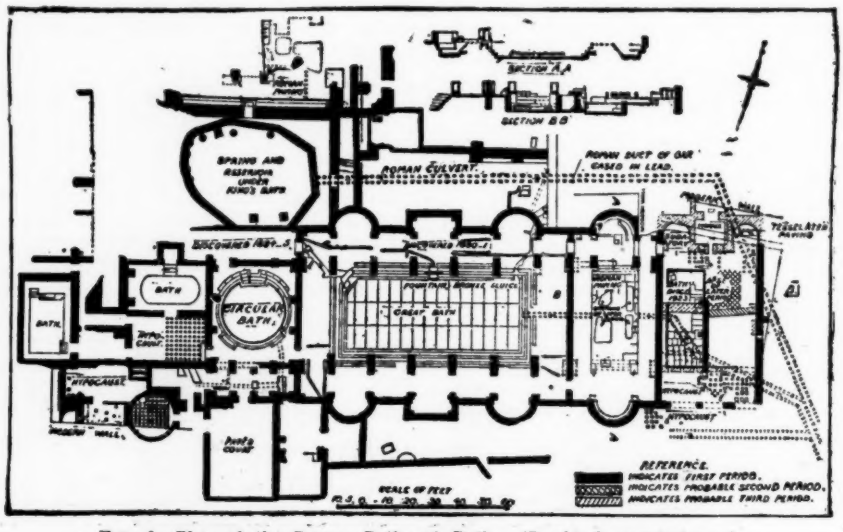


FIG. 4.—Plan of the Roman Baths at Bath. (By kind permission of Mr. Alfred J. Taylor, Architect to the Baths Committee.)

The handsome stone balustrade still exists, with the inscription recording that it was the gift in 1624 of Sir Francis Stonor, Kt., in return for relief given by the bath from "gout and aches in the limbs," the donor "living many years after well in health to the age of near ninety."

The brass rings in the walls, the votive gifts of grateful bathers between 1602 and 1784, bear many interesting inscriptions. One is inscribed with the name of Barbara, Duchess of Cleveland, and another was presented by John Revet, brazier to King Charles the Second, who attributes his recovery to "God's Marcy and Pumping."

Flowing from unknown depths for untold ages, the King's Spring is the very *fons et origo* both of the bathing establishment and the city of Bath itself. One side of the King's Bath forms part of the Roman Thermae, opposite is the wall of the eighteenth century Pump Room; the west end of the bath is the beginning of the present bathing establishment with all its modern equipment and scientific methods, while at the other end is the concert hall to remind us of the important part music and recreation now play in a spa cure.

To the building of the King's Bath Roman and Saxon, Norman and Tudor, Georgian and succeeding generations, have in turn contributed, thus, as an inscription on the south wall records, connecting in work and object the modern with the ancient world.

England and Wales.

NOTTINGHAM GENERAL HOSPITAL: RANSOM MEMORIAL LABORATORY.

THE new Pathological Laboratory of the Nottingham General Hospital, which has been instituted in memory of Dr. William Henry Ransom, F.R.S., and his son, Dr. William Bramwell Ransom, was opened on June 12th by Sir John Rose Bradford, K.C.M.G., C.B., F.R.S., consulting physician to University College Hospital, London. The ceremony was held in the board room of the hospital. Sir Charles Seely, who presided, read a message from Mr. James Forman, president of the hospital, expressing deep regret at being unable to be present and pay respect to the memory of two men, father and son, who did so much for Nottingham and its General Hospital. The chairman said that Dr. W. H. Ransom was appointed honorary physician to the institution in 1854, and continued as senior physician until 1890, when he resigned. His place was taken by his son, who carried on the duties until 1909. During their combined period of office the medical profession and the hospitals of the country performed one of the greatest services to the human race which any set of men had ever done; the happiness and comfort of life had increased enormously. In the general advance of medicine and surgery the Ransoms bore a full share of the work. He did not suppose anyone had striven harder for their fellow men, and with less regard for their own comfort and health.

Sir John Rose Bradford, in the course of his address, paid tribute to the distinguished services rendered by the Ransoms to medicine and to science, and to their work in promoting the welfare of the inhabitants of Nottingham. For over half a century father and son were identified with the manifold activities of the city. Neither confined himself to the narrow pursuit of his profession, but each took an active part in all work designed to make the individual more efficient for the discharge of his duties as a citizen. It was only fitting, therefore, that some acknowledgement in the form of a permanent memorial should mark the appreciation felt by their fellow men for their devoted work. The elder and the younger Ransom resembled each other in that their early work was not concerned with the investigation of a definite medical problem, but was carried out with the object of elucidating some fundamental question in biology. In other words, before specializing in their life work as practitioners of medicine, they acquired a wide practical knowledge of the larger subject of biology, of which medicine was but a part. The history of medical science, like that of science in general, taught that the great advances had come about as a result of some discovery in what was misnamed abstract science. Nowadays the value of laboratories and laboratory methods in the daily work of medicine was so universally recognized that not only could no hospital dispense with one, but no practitioner could do his work without having means of access to such an institution. The Ransoms were pioneers in recognizing that development must take place, and each throughout his career developed such methods to the fullest possible extent under the conditions then existing. It was more especially for that reason that the form taken by the memorial was so singularly appropriate.

At the conclusion of the ceremony the Bishop of Southwell performed a short dedicatory service; and a vote of thanks was accorded to Sir Charles Seely, Sir John Rose Bradford, and the Bishop, on the proposal of the senior physician, Dr. F. H. Jacob, seconded by Mr. J. K. Wright. Afterwards the company proceeded to the new department in Amberley Street.

The Ransom Memorial Laboratory, designed by Messrs. Evans, Clark, and Woollatt, is admirably equipped and is already in full working order. The medical staff has long felt the need of a pathological department as an integral part of the hospital. The laboratory is in charge of Dr. J. Kilian Clarke, late of St. Mary's Hospital, London.

A NEW LONDON RESERVOIR.

Less than a generation ago it seemed not improbable that London would go to the mountains of Wales for its water. A Royal Commission made a long inquiry, and a scheme was drawn up, but to carry it out would have

involved a very large capital expenditure. Nothing came of it, and the Metropolitan Water Board proceeded to develop local sources. It seems now certain that water for London will in future, as at present, continue to be drawn from the Thames, supplemented by the Lea and certain chalk wells. Guided by its medical adviser, Sir A. C. Houston, Director of Water Examination, and by its engineers, the Metropolitan Water Board has succeeded in instituting effective methods of purifying river water, and the policy has necessitated the establishment of large reservoirs both for settling and for storage. Twelve years ago the King and Queen visited the then new reservoir formed at Chingford, in the Lea Valley; the ceremony took place at the tercentenary of the opening of the New River works due to the genius of Sir Hugh Myddelton. That reservoir, which bears the name of King George, has a capacity of nearly 3,000 million gallons, and cost £407,000. A still larger reservoir has recently been completed at Littleton, near Staines, for Thames water; its capacity is 6,750 million gallons, and when quite completed it will have cost £2,145,364, including all buildings, machinery, and conduits. Its banks have a circuit of four miles, embracing 800 acres, and when filled it could provide anchorage for a fleet of battleships. It is larger than all the other Thames Valley reservoirs put together, and will hold enough water to supply the seven million inhabitants of London for a month. The King, who was accompanied by the Queen, visited the reservoir on June 13th. After inspecting the intake from the river and then crossing a handsome granite bridge carrying the road over the intake Their Majesties went on to a granite platform forty feet above the bed of the reservoir; the King, by pressing a button, started the pumps and said, "I name this the Queen Mary reservoir." At a dinner in London in the evening, when Mr. J. C. Musgrave, chairman of the Metropolitan Water Board, was in the chair, the toast to the Ministry of Health was given by Mr. E. B. Barnard, who said that the undertaking of the Board was the greatest municipally owned thing in the world. Lord Long was right when he took the supply of water out of the hands of companies, because he believed that nothing touching public health should be subject to the temptation of profit. The toast was acknowledged by Sir Arthur Robinson, First Secretary of the Ministry of Health. Lieutenant-Colonel J. B. P. Karslake then submitted the toast of the constituent authorities, through whose co-operation it had been possible for the Water Board to carry out the work it had accomplished during the last twenty-three years in improving and supplementing the water supply of London. The toast was acknowledged by the chairman of the London County Council. Lord Desborough, chairman of the Thames Conservancy Board, in responding to the toast of "The Visitors," said that the Board's increased storage capacity would relieve the Thames Conservancy of considerable anxiety in times of drought. In 1921, when for some months the rainfall in the Thames Valley was little or nothing, instructions were issued to millers and lock-keepers to store water in the forty-seven reaches along the 136 miles of river. If the Water Board told the Conservancy that it wanted to pump water so stored it would be possible to save the metropolis from the menace of drought in future. Should London be menaced with drought this year, and the Board informed the Conservancy of its needs, the Conservancy could let down from the Cotswold Hills water thus stored and the Board could pump it up.

HARVEIAN SOCIETY OF LONDON.

The annual dinner of the Harveian Society of London was held on June 11th at the Connaught Rooms, under the presidency of Sir John Broadbent. A large number of distinguished guests were present. Sir Humphry Rolleston, proposing the toast of "The Harveian Society," referred to many present and past distinguished members, and also mentioned the Harveian Lectures. The President, replying, touched on various sides of Harvey's life and work, including the occasion of his appointment to St. Bartholomew's Hospital, when he drew up regulations for its internal administration. In these rules were instructions that the surgeons should consult with the physicians in all difficult cases, and that the surgeons should not operate on the body nor give treatment without the consent and direction of physicians. All the regulations were approved by the hospital, but Sir John Broadbent believed that conditions had somewhat altered since. He referred also to Mr. Buckston Browne's gift of a portrait of Harvey and £1,000; the interest of this sum would be devoted to the presentation of a prize of £50 in alternate years, together with a medal designed by Mr. Langford Jones, who was present at the dinner. The toast of "The Visitors" was proposed by Mr. V. Zachary Cope, and Sir William Leishman, Sir StClair Thomson, and Sir Edward Marshall Hall replied. Sir StClair Thomson, speaking at times with something more than a shade of American accent, due, as he explained, to events of the last fortnight, referred to many of the visitors present in a characteristically witty speech. He repelled the insinuation that he himself was a visitor, and insisted that he had been a member of the Harveian Society for thirty-two years, and still paid his subscription.

THE MEDICAL WOMEN'S FEDERATION.

The membership of the Medical Women's Federation at the end of 1924 reached the figure of 900. At the annual meeting held last month in London it was decided that a fund should be raised for endowing a bed in the Taylor Memorial Home for Incurables, at Birmingham, in memory of the late Dr. Mary Sturge, a former president of the federation. Miss Frances Ivens was re-elected president at the half-yearly meeting of the council. Reports were also received from subcommittees appointed to consider lunacy reform, assaults on young persons, the defence of married medical women, and the Nursing Homes (Registration) Bill. The national corresponding secretary of the Medical Women's International Association stated that the association was extending in various countries; the German medical women had formed a national association with a membership approaching 600.

MEMORIAL TO THE LATE DR. T. D. LISTER.

On May 30th the council of the National Sanatorium Association entertained the delegates of the conference of the Post Office Sanatorium Society at the National Sanatorium, Benenden, and a memorial tablet to the late Dr. T. D. Lister was unveiled by the chairman of the Council, Mr. R. E. V. May. In an address the services of Dr. Lister to the Benenden Sanatorium and to the antituberculosis campaign in general were strongly emphasized. The tablet, which is in the entrance hall, bears the inscription: "Erected by the Council of the National Sanatorium Association, Benenden, Kent, to commemorate the untiring zeal and devoted service of Thomas David Lister, C.B.E., M.D., M.R.C.P., one of the founders of this institution, and for 17 years advisory physician to the Council, who by his personal sympathy endeared himself to all. Born January 30th, 1869, died July 30th, 1924." A tablet has also been placed in a room in the sanatorium to the memory of Dr. David Duncan Reid, who died last November. He was vice-chairman of the National Sanatorium Association, and member of the Hospital Saturday Fund Committee.

Scotland.

PATHOLOGICAL BIOCHEMISTRY IN THE UNIVERSITY OF GLASGOW.

THE University and the Royal and Western Infirmaries of Glasgow have recently received considerable benefactions for the purpose of promoting the advancement of medical knowledge by biochemical and other scientific methods. At each infirmary suitable laboratories are being provided and equipped, and the University has agreed to co-operate by providing at each a university lecturer in pathological chemistry, who shall also be appointed by the infirmary its clinical biochemist. The stipend of the joint post, which is a whole-time one, will be £700 a year. The duties include the giving of practical instruction in biochemical methods to students and practitioners, promoting the advancement

of medical knowledge by scientific investigation, and assisting the physicians and surgeons by undertaking chemical examinations and tests in relation to their patients. It is expected that appointments to the new offices will be made during the summer vacation.

MAINTENANCE OF VOLUNTARY HOSPITALS IN SCOTLAND.

In an address delivered to the annual meeting of the Scottish Clerks' Association in Glasgow, on May 30th, Sir George Beatson said that reorganization of the hospital system was urgently necessary. Suitable hospital treatment should be placed within reach of all classes of the community. What he would like to see in the hospital system was (1) improved co-ordination between all the hospitals; (2) abolition of Poor Law hospitals; (3) restriction of the services of the existing voluntary hospitals to the needs of poorer artisans and manual workers, with the adoption of a contributory system of payment carried out by insurance; (4) the establishment of paying hospitals with moderate charges for the upper middle classes; and (5) nursing homes with higher charges for the more wealthy classes. The question of approved societies providing hospital treatment for their own members was of great importance. This he thought might give a lead which would materially help to a solution of some difficulties in the hospital crisis. It seemed to him that there were three lines of policy open: one was to follow the present practice of making application to the voluntary hospitals in the usual way and waiting their turn of admission for free treatment while the society made a contribution to the funds of the hospital; secondly, an arrangement might be made with different hospitals for members who wished to be admitted as contributory patients making a payment based upon the cost of maintenance, and for this the society would require to charge its members a separate insurance fee; thirdly, the society might itself arrange to provide hospital treatment for its own members and dependants by having its own hospital, the cost to be met by a special insurance rate. He thought that no one could be satisfied with the system under which the voluntary hospitals were conducted at present, for they were largely utilized, free of cost, by patients for whom they were not intended. This state of affairs was not due to patients being unwilling to pay, but because hospital directors seemed unwilling to depart from the open-door plan, despite the fact that they saw it entailed financial embarrassment. To apply legacies to annual current expenses was open to grave objection and contrary to the first principles of sound economy. If hospital expenditure were examined it was found that it was divisible into two main groups, the first including the maintenance of the hospital itself (two-thirds of the annual expenditure), and the second the maintenance of the patients (one-third of the annual expenditure). He thought it would be a fair arrangement to place the larger amount on the general public and the smaller share on those who were less favoured financially. Such a maintenance payment need not be heavy and might be made up by a very moderate weekly insurance charge. He could only offer a very general calculation as to what the amount of this should be. Assuming, as hospital figures showed, that the stay of a patient in hospital averaged three weeks, the total cost for an operation case would be about £3 18s. 9d., for a non-operative surgical case £2 17s. 9d., for a medical case £2 6s. 9d. Such payments would relieve the hospitals of a great financial strain, would bring in an assured annual income, and would leave legacies and all annual subscriptions to be devoted to the upkeep and improvement of the hospital itself.

CLINICS FOR CRIPPLED CHILDREN.

At a meeting of the Edinburgh Branch of the Chartered Society of Massage and Medical Gymnastics held in Edinburgh for the purpose of raising the initial funds to establish a clinic where massage and remedial gymnastics would be available at a low cost for crippled children, Mr. W. A. Cochrane, F.R.C.S.E., indicated the close association between ordinary orthopaedic work carried out in hospitals and the work of the society in relation to all kinds of deforming and crippling diseases amongst children. It was important to link up such work with the care and cure of the crippled child. There were in England and Wales at the present time about 150,000 crippled children, and these were being augmented at the rate of 15,000 a year. It was estimated by the Central Committee for the Care of Cripple Children that 10,000 beds were actually required for their treatment, while there were only 3,000 at the present time available under the county schemes in England. The waiting lists in hospitals were so large that the crippled child had to take his turn after more urgent cases, and was discharged immediately after an operation, so that after-care could not be carried on. Under the schemes for county clinics small clinics would be provided at different centres where after-care sisters, as they were called, could see the mothers and advise them. Cases would be drafted into hospitals as necessary and after treatment sent back to their homes to be followed up from the after-care clinics. This work was being done both in England and in Continental countries, while in America, as the result of a special organization, clinics were in operation all over the United States and Canada caring for about half a million cripples. How many crippled children there were in Scotland was not known, but he specially recommended this cause to public munificence and generosity.

HOME RELIEF FOR INCURABLES.

The annual general meeting of the Royal Society for Home Relief to Incurables, Edinburgh, was held in Dowell's Rooms, Edinburgh, on May 29th. Dr. William Robertson, medical officer of health for Edinburgh, presided. The chief object of the society is the payment of a money grant of the value of £10 a year to persons resident in Scotland who are certified to be suffering from incurable diseases, and who are, as a result, no longer able to earn a livelihood. The annual report stated that during the past year the sum of £4,784 had been paid in this manner. The chairman referred to the greatness of the work of the society, which lay in the fact that it threw gleams of light into the lives and homes of the most unfortunate. He was, however, glad to see on glancing down the list of diseases which called for their assistance that there were some which were preventable, and he would predict with considerable confidence that the demands on the society would be reduced when medical science was able to bring its weapons to bear on some of the diseases for which assistance was at present given.

NEW EDINBURGH HOSPICE.

The Elsie Inglis Memorial Maternity Hospital was visited on May 30th by the members of the Edinburgh Women Citizens' Association. The hospital, which will, it is expected, be open in July, will be staffed entirely by women. When in full working order there will be accommodation for 50 patients, in addition to provision for 10 ante-natal cases, 22 nurses, 8 resident women medical students, and the administrative staff. The building and grounds have cost £40,000, and this sum, together with sufficient money to pay for equipment, has already been subscribed. The income of the hospital will be derived from paying patients, from the maternity benefit of insured persons, and from public subscriptions. The number of beds used will depend largely upon the funds derived from the last-named source.

HOSPITAL COLLECTIONS.

At a meeting of the board of managers of the Royal Infirmary of Edinburgh on June 1st it was reported that the receipts during the past two weeks had amounted to over £7,050, including a sum of £5,161 on account of money collected by the pageant and other activities held on the badge day, Saturday, May 23rd. A contribution from the Prudential Approved Society in recognition of treatment received by members of that society for the quarter from March 31st, 1925, amounting to £709 15s., was also intimated. Last month an effort made by Aberdeen University students to raise funds for the local hospitals was completed, with the result that £4,945 was collected. An annual effort of a similar nature made by Aberdeen students during the past six years has resulted in the collection of a total of £22,039 for Aberdeen hospitals.

CENTRAL MIDWIVES BOARD FOR SCOTLAND.

The examination of the Central Midwives Board for Scotland, held simultaneously in Edinburgh, Glasgow, Dundee, and Aberdeen, has just concluded. Out of 129 candidates, 120 passed. Of the successful candidates, 26 were trained at the Royal Maternity Hospital, Edinburgh, 24 at the Royal Maternity Hospital, Glasgow, 5 at the Maternity Hospital, Aberdeen, 13 at the Maternity Hospital, Dundee, 11 at the Queen Victoria Jubilee Institute, Edinburgh, 11 at the Cottage Nurses' Training Home, Govan, Glasgow, and the remainder at various recognized institutions.

INTER-STATE POST-GRADUATE ASSEMBLY OF AMERICA.

VISIT TO LIVERPOOL.

A COMPREHENSIVE and varied programme had been arranged beforehand for the visitors on June 8th, 9th, and 10th. The staffs of the four general hospitals provided ample opportunity for the exhibition of cases, practical demonstrations, and varied surgical procedures. The formal welcome took place at the Liverpool Medical Institution on June 8th, where every facility was provided for the visitors to gratify their wishes in any department of medicine. The President, Mr. R. C. Dun, was in the chair, and in a short address assured his American colleagues of the pleasure the profession in Liverpool had in entertaining them. Several short papers were read on topics uppermost in medical literature at the present time. After tea an exhibition of cases illustrating children's diseases, orthopaedics, skin diseases, and nervous diseases took place. The exposition of these cases was much appreciated by the audience. Sir Robert Jones, who was present, often gave a practical demonstration either on his own arm or those of his interlocutor in connexion with the display of orthopaedic appliances. In the evening a musical soirée was held in the Walker Art Gallery, where the visitors had the opportunity of seeing the works of art and listening to an excellent programme of music.

On Tuesday the various hospitals were visited, and each department received a quota of Americans interested in its particular branch of medicine. In order to prevent undue crowding, tickets limiting numbers were issued at the Liverpool Medical Institution, which was thrown open to the visitors, and from which all information was supplied. The City Isolation Hospital and Sanatorium at Fazakerley claimed a large number, who took great interest in the methods of isolation in infectious disease and the treatment of tuberculosis by arc light and surgical measures. At the Children's Hospital at Heswall clinical demonstrations of medical and surgical cases were given by the staff. The visitors admired greatly the hospital and the surroundings.

In the evening of June 9th the Lord Mayor held a reception, which was thronged with the medical profession from both sides of the Atlantic. On all sides expressions of appreciation from the visitors were voiced with animation and sincerity. The Town Hall was decorated with flowers arranged with great taste. Not a few of the Americans were accompanied by their wives, who were charmed with their surroundings, and regarded their visit to England as one to their old home. In the afternoon of June 10th a large party visited Ruthin Castle, North Wales, where they were entertained by Dr. E. I. Spriggs and the staff. Clinical demonstrations on recent work and methods were given and the institution thrown open to inspection. The historical interest of the castle added much to the pleasure of the visitors.

Mention should be made of Mr. Robert E. Kelly, on whose shoulders the chief burden fell in making the arrangements and so ensuring the success of this visit. The sincere expressions of pleasure from our American colleagues will have amply rewarded him for his labour in making their visit memorable in the annals of medical affairs in Liverpool.

VISIT TO IRELAND.

The American doctors who travelled to Ireland divided themselves into two sections, each section visiting alternately Dublin and Belfast. During their visit in Ireland they were entertained at receptions and garden parties by the Governor-General of the Irish Free State, the Governor-General of Northern Ireland, the President and Executive of the Irish Free State, and the Lord Mayor of Belfast.

DUBLIN.

The visitors attended nearly all the Dublin clinical hospitals, where they followed with keen interest the various surgical operations and demonstrations. A large number of the doctors also attended at University College (National University), where a discussion took place on the sequelae of encephalitis lethargica, opened by Dr. F. C. Purser. Sir James Craig presided.

The most noteworthy function of the day was, however, at the Royal College of Physicians, Kildare Street, Dublin, where a large gathering, representative alike of the visiting doctors and the members of the profession at home, assembled to witness the admission of Dr. Charles H. Mayo and Professor George W. Crile to the Honorary Fellowship of the Royal Academy of Medicine in Ireland. Professor Sir James Craig, M.D., T.D., President of the Royal Academy of Medicine in Ireland, presided, and on the platform were: Sir William Thompson, President of the Royal College of Physicians, and Mr. C. B. Maunsell, President of the Royal College of Surgeons, with their maces; Sir William de Courcy Wheeler, Sir John Moore, Sir William Taylor, and Sir Thomas Myles. Dr. Charles H. Mayo occupied a seat on the chairman's right. Professor Crile was unavoidably absent.

The President of the Academy, Sir James Craig, extended a hearty welcome to the American doctors who had done them the honour of coming to Dublin. He hoped that they would return to their homes with nothing but the most sincere pleasurable memories of their visit; also with knowledge which had been gleaned at the source and from personal touch and experience. They were assembled, he said, to confer the Honorary Fellowship of the Royal Academy of Medicine in Ireland upon two very eminent American surgeons—Dr. Charles Mayo and Professor George Crile. The honour was small in comparison with the merits of the recipients, but this much might be said: that the honour was greatly enhanced because of the care exercised by the Council of the Academy in the selection of those only who occupied the highest position in scientific medicine. There were at the moment only twelve Honorary Fellows on their list, and only two had been conferred in the last thirteen years. He thought that the Academy had not been overgenerous in its recognition of American work, but still there were found on the past roll the names of four Americans whose names were familiar to all. These were Thomas Addis Emmet, Austin Flint, Howard Kelly, and William Osler. They were now adding two to the number. Sir James Craig thanked Dr. Mayo, who is President of the American College of Surgeons, for the honour conferred on him in making him an Honorary Fellow of that body.

Introducing Dr. Mayo, the secretary of the Academy, Dr. T. P. C. Kirkpatrick, said:

"History tells us that the great Empire of Rome sprang from a city founded by two brothers, Romulus and Remus, and that city was afterwards saved from destruction by the prowess of the great twin brethren. In the empire of medicine we ourselves have witnessed the development of an institution which sheds its light and exerts its influence in regions Caesar never knew, yet which, like Rome of old, is the offspring of two brothers—the brothers Mayo."

In reply Dr. Mayo said that this was indeed a great honour. So many of his countrymen were there who had done remarkable work in their many lines in scientific medicine that he felt the honour extended to him was extended to them as he represented them. He was glad to see some members of that Academy wearing the robes of the College of Surgeons of America, of which college he had the honour of being President this year. He appreciated very much that they saw fit to wear these gowns

on that occasion. The science of medicine had been upheld in Ireland at a very high point—as high as in any place, considering the population and the number of men engaged in medical work. Irish medical men had contributed their portion to scientific advancement in many ways. Since he was a boy he had always thought of Dublin as a great centre of medicine. In his imagination he had expected to see the Rotunda Hospital something enormous. The enormous part of it was that it turned out literally hundreds and hundreds of men well trained in the special work carried on in the institution. The members of the Royal Academy of Medicine in Ireland were doing their part in a country that had never been wealthy, but whose people had always been great. The medical profession had always done its part, regardless of any political condition. Science knew no country and no language. He could not help thinking that one of the great things about the people in Ireland was their charity and their friendliness. They were always willing, regardless of whatever they had, rich or poor, to help those in need. They were appreciated in America and all the world over. He accepted the honour with a deep feeling of humility for his own shortcomings, but with a profound thankfulness that it would go back as representing the work of the many in America—the work of their two great associations, and in particular the work of the Mayo Clinic.

The Honorary Fellowship was conferred on Professor G. W. Crile *in absentia*. A number of the American doctors were entertained at dinner by Sir W. I. de Courcy Wheeler. During the proceedings the Governor-General (Mr. Healy), who was present, was admitted an honorary member of the Inter-State Post-Graduate Assembly of America. Dr. Charles Mayo said the Assembly had few honorary members and only three laymen as honorary members; these were President Coolidge, the Duke of York, and the Duke of Connaught; now they proposed to add the name of the Governor-General of the Irish Free State.

BELFAST.

On June 13th the Queen's University of Belfast conferred honorary degrees on three of the visitors. The ceremony took place in the examination hall of the University. The Chancellor of the University, the Marquess of Londonderry, K.G., presided, and conferred the degree of Doctor of Laws, *honoris causa*, on Dr. Charles H. Mayo, Dr. Franklin H. Martin, and Dr. H. Cabot.

In the evening the three new graduates were entertained to dinner in the Medical Institute by the medical faculty of the University and the members of the medical staffs of the teaching hospitals of the city. The Vice-Chancellor occupied the chair, and after the loyal toast of "The King" proposed that of "The Guests" in his usual felicitous manner; and his theme was supported by remarks from Professor Fullerton, Mr. Mitchell, and Dr. Dempsey. The toast was responded to by Dr. Mayo for himself and for Dr. Martin and Dr. Cabot, who were unavoidably absent. Dr. Woods Hutchinson and Dr. Peck were also called upon, and responded with thanks from the Assembly. Dr. Mayo then, as President, conferred the honorary membership of the Inter-State Post-Graduate Assembly of America upon Professor Andrew Fullerton, F.R.C.S.I., Honorary Fellow of the American College of Surgeons, and upon Dr. Robert Marshall, F.R.C.P.I., both of whom had been indefatigable in their efforts to make the visit of their American friends a success in every way. The announcement was received with loud applause, and gave great satisfaction and pleasure to all present, and will be gratefully recognized by the profession in Northern Ireland. The dinner ended with singing "Auld Lang Syne" and the National Anthem.

Owing to a clerical error in the list officially supplied to us of those representatives of British medicine upon whom the honorary membership of the Inter-State Post-Graduate Assembly of America was conferred during the London visit, we omitted to state last week that Sir James Berry, F.R.C.S., was one of those to whom this honour was paid.

Correspondence.

MEDICAL EDUCATION IN WALES.

SIR,—I have been much interested in the article on the Welsh Medical School question in your issue of June 13th (p. 1094); but I trust you will allow me to say that the writer does not seem to me to be quite fully informed as to the facts of the case.

The policy of separating the Cardiff School of Medicine from its parent college was not a recommendation of the recent Royal Commission, but a demand of the Treasury, made before the Commission was appointed, with reference to an application from the college for the State endowment of the school, and as a condition of considering it. The Treasury in those days had ample reason to apprehend that the award of such a grant to a single college of the university would be speedily followed by commensurate claims from one or both of the two others. The college at Cardiff was at first disposed, in the interests of the school, to enter into some such arrangement with the Treasury, and the Royal Commission recommended what they held to be the best method of carrying it out; but after the issue of their report a good deal of public opposition to the idea of separation manifested itself, a change was about the same time introduced in the mode of assessing State grants to the university and its colleges, the Government dropped the subject, and the new Charter of the University of Wales, based on the Commission's report and granted by the Crown in 1921, made no reference to it, but specifically indicated "the University College of South Wales and Monmouthshire" as the seat of medical education in the university (cf. Art. XVII, 2, and Art. VI, 2, viii and ix). The present aim of the Privy Council, seemingly, is to wave aside Crown, Government, and Commission alike, and to force the university and the college into accepting a new scheme of separation, stated to have been drawn up by the University Council, apparently at the instance of Whitehall.

This new scheme, instead of erecting the medical school into an independent constituent college, as the Commissioners advised, proposes to relegate it to an institution of inferior rank and lesser privilege, under the name of a "school of the university." The article I am referring to seems to suggest that this scheme has the approval of the faculty of medicine of the university; my information is that it has not yet been before the faculty.

That the scheme is wholly illegal under the existing charter of the university is plain to anyone who knows that document; the curious point is that none of the promoters of the scheme, either in Wales or in Whitehall, appear to have discovered this fact until the college pointed it out.

What public advantages are anticipated from the proposal the college has yet to learn. No statement on the subject has so far reached it. It is a subject, indeed, on which the advocates of separation have always shown themselves singularly reticent. The obvious and grave objections, financial and academical, to the proposed isolation of the medical school were forcibly pointed out some months back by a very competent authority, the present Vice-Chancellor of Liverpool, in a communication to the *Western Mail*. They have, further, been set out at length in the reply that the college has just made to the Privy Council, which also has been communicated to the press. The college, at least, has no occasion for secrecy in the matter. As regards the "nationalism" of the school of medicine, all the University Colleges of Wales, in their entirety, are national institutions, and, like the medical school, receive a large part of their income from a national fund, to which all parts of Wales contribute.—I am, etc.,

Weston-super-Mare, June 15th. ISAMBARD OWEN.

PERINEAL DRAINAGE AND PROSTATECTOMY.

SIR,—For many years I have invariably employed perineal drainage after internal urethrotomy. At the completion of the operation the urethra is opened by a small incision in the perineum and a rubber tube introduced into the bladder. The tube, which has a lumen about equal to that

of a No. 12 catheter, is sufficiently long to drain comfortably into a urinal between the patient's legs or on the outside of the thigh. It is kept in position by a silkworm gut suture, which fixes it to the skin of the perineum. The tube is well tolerated, and is left in for five or six days. No instruments are passed along the urethra for twelve days, after which a No. 12 bougie is passed daily. The perineal wound quickly heals, and the patient almost always is fit to leave the hospital in sixteen days. There is no reaction when perineal drainage is employed in this way, and the absence of fever and discomfort is in marked contrast with my earlier experience when a catheter was tied in the urethra.

I was led to employ perineal drainage after prostatectomy in the case of a highly nervous man who was suffering from cystitis of several months' duration.

The cystitis was set up by the passage of a catheter for retention of urine. He was very intolerant of catheterization and so excitable and unmanageable that a two-stage operation would have been difficult to carry out unless a general anaesthetic had been given each time. The bladder was opened under a general anaesthetic and the prostate removed. A tube was then introduced from the perineum into the prostatic pouch—its exact position was easily ascertained by a finger introduced into the bladder from the suprapubic wound. The prostatic cavity was then packed with gauze in the usual way. After forty-eight hours the gauze was removed and the bladder washed out through the perineal tube. Urine flowed freely through the tube and was collected in a bottle. Twice a day the bladder was irrigated with weak silver nitrate solution and the perineal tube was left *in situ* for a fortnight. The patient made a perfectly smooth recovery and the suprapubic wound healed in about three weeks.

Since then I have employed perineal drainage on several occasions, and with uniformly satisfactory results. The introduction of the tube is very easy: the urethra is opened by cutting down on to a Wheelhouse's staff in the urethra; the tube is then guided into the prostatic pouch in a curved pair of forceps and fixed in position by a silkworm gut suture, which transfixes it and the skin in the perineum. The advantages are that: (1) irrigation of the bladder and prostatic pouch can be carried out easily and efficiently; (2) urine escapes from the bottom of the bladder and the pool of pus and old clot which tends to collect in the prostatic pouch is prevented; (3) the patient is comparatively dry from the first, very little urine escaping from the suprapubic wound after the removal of the gauze; (4) convalescence is shortened, the suprapubic wound healing in a time appreciably shorter than usual.

For the reasons given, the greater comfort secured to the patient, and economy in dressings, I consider that perineal drainage confers real advantages. Although my experience of it is as yet too limited to enable me to dogmatize, I believe that it will materially diminish the risk of late septic troubles which develop when the suprapubic wound is closing and of phosphatic deposits in and upon the walls of the prostatic pouch.—I am, etc.,

Edgbaston, Birmingham, June 11th. WILLIAM BILLINGTON.

SUBURBANIZATION.

SIR,—The thanks of your readers are due to you for the excellent leader in your issue of May 30th on suburbanization. We cannot afford to make any more mistakes such as those which created our slums. We have no longer vast profits to spend as we like, for we have not the monopoly of manufacture, nor are we now the workshop of the world. The mistakes of to-day will be even more serious than those made a century ago, unless we can regain our lost markets. But there is another reason why we should scrutinize new buildings. In the past a house may have had its own well and its own cesspool, its oil lamps or candles, and a lightly made road to serve the light traffic. Now the road must bear heavy motors on six inches of concrete, beneath which run sewers, gas, water mains, and lighting cables, not to mention power cables also where such are in use. All this is costly beyond the dreams of our ancestors. It must be done, but the road and the services beneath it should be laid out to the best possible advantage—that is, the road should serve as many houses as possible, and therefore should be as short as possible. A ribbon of houses fringing a long arterial road must need more roadway, more sewerage, more gas and water pipes and electric cable than the same number of houses well laid out round a central point, from which roads and services would radiate, and to which the citizens would come for common purposes, not only for amusement and education, but also for local self-government. Such a centre should be an ornament and an attraction to the town, like some of the squares in Florence or Venice.

What our forefathers did in walled towns surely we could do when we are no longer pent in behind fortifications. Towns need not be ugly, and with modern improvements traffic need not be either dusty or noisy. It is hard to believe that if once we made our towns graceful the people would fail to take a pride in them. Then perhaps the streets would not be littered with bus and tram tickets, mixed with greasy papers thrown down by the customers of the local fried-fish shops. I fear to trespass further on your space, but I hope that the medical profession may be roused to do all that is possible to prevent any further suburbanization on ribbon lines.—I am, etc.,

June 11th. SENEX.

DOCTORS AND CORONERS' (? INQUEST) FEES.

SIR,—Until comparatively recently, should a coroner require medical evidence of the cause, or probable cause, of a death, the usual method of procedure was for some medical practitioner to be instructed, through the medium of the coroner's officer, to make, or cause to be made, a *post-mortem* examination, with or without an analysis of the contents of the stomach, and to present himself before the coroner's court on some future date, then and there to give evidence touching the death of A. B. and therein fail not at his peril.

For the carrying out of these instructions he was legally entitled to the princely fee of two guineas in all—namely, one guinea for performing the revolting work of the *post-mortem* examination, and the other guinea for his medical evidence at the subsequent inquest.

Out of the first guinea he could not do otherwise than "tip" either the mortuary attendant, who assisted at the *post-mortem* examination, if there was a mortuary, or the assisting policeman, if there was not a mortuary, or both these men. So far so—bad, as regards the adequacy of the fees.

Legally, moreover, the doctor *could*, though he hardly ever did, refuse to give his evidence in the coroner's court until he had received his fees, such as they were.

Recently, in country districts, it has frequently been the coroner's method, where a "certificate of the cause of death" is refused by a doctor, to send the coroner's officer, or the nearest resident policeman, to "pump" the doctor as to his opinion as to the cause of death, with a request that he (the doctor) should provide "a provisional death certificate," or such information as may enable the coroner to grant a death certificate himself without any inquest being held at all. For doing this the doctor is informed that he will receive "the usual fee," and, after a considerable interval, for complying with this ingenious demand, he receives a visit from a constable, who tenders him the fee of—three shillings and sixpence! for which he must sign a formal receipt. This corresponds to an ordinary day attendance police-call fee.

Once or twice I have been instructed to visit and view the corpse and report, to the best of my ability, without, of course, any *post-mortem* examination or inquest being held at all. In both instances the fee tendered was the same—three shillings and sixpence!

In this locality there are a very large number of the sect of "the Peculiar People," whose monomania is, roughly, a disbelief in any medical or surgical treatment, and the absolute refusal of either. Should death appear probable to the "elders" of this sect, or to the friends of the patient, and *only* then, a doctor is called in, in the hope that a death certificate may be obtained, the doctor being thus placed in a position enabling him to state when he last saw the patient alive, and so obviate the necessity for "opening the body," etc. Of course, all treatment is refused, even though in the doctor's opinion life might have been either saved or prolonged. Such certificates, I need hardly say, I invariably refuse to give.

Now, Sir, I ask for enlightenment on the following points:

1. Is a doctor obliged, on the coroner's instructions—written, verbal, or telephoned—to act as above stated, and that for a three-and-sixpenny fee (irrespective of mileage)?

2. May he refuse to render to the coroner any opinion he may have formed as to the cause of a death, until he has received (or been guaranteed) the recognized inquest fee of one guinea, which of course he could have demanded had an inquest been held?

3. Is a doctor legally obliged to perform a *post-mortem* examination on a coroner's order, or, failing this, cause such an examination to be made by somebody else?

Only a few days ago the village constable called upon me and tendered to me ten shillings and sixpence as representing three fees for obliging the coroner, as above stated, on three separate occasions, all of which happened some considerable time ago, and for which I had to sign the usual formal receipt.—I am, etc.,

June 15th. WILDMAN E. BAKER.

DISEASES DUE TO FASHION IN CLOTHING.

SIR,—I can confirm the cause of erythema of the legs in young women suggested by Dr. Gibson (June 6th, p. 1059). A young relation of my own told me she had something the matter with her legs, and I found she had erythema, with slight irregular swelling of both legs from knee to ankle. Later I noticed that when an opportunity came she drew her chair as near to the fire as possible, and concluded that the cause of her complaint was over-heating, and not cold. Now that fires are discontinued the oedema is quickly lessening and the erythema disappearing without any local or other treatment.

I was present at the meeting of the Dermatological Section of the Royal Society of Medicine when the two cases of erythema referred to by Dr. Parkes Weber were shown, and the case of my relation was exactly like them. Curiously, a visitor friend at this meeting remarked, when he saw these cases, that they had been sitting too near the fire. I have since made inquiries and discovered two sisters who have suffered from a similar complaint, one mild and the other severe, and both were in the habit of sitting as close as possible to the fire.

Thus it would appear that this complaint is more common than it is supposed to be, and it is not thought serious enough by the sufferers to seek medical advice. I recall the fact that our grandmothers were in the habit, when the chance occurred, of sitting close to the fire and drawing their skirts above the ankle only. Thus they were saved from erythema by their longer skirts and thicker stockings.—I am, etc.,

Twickenham, June 15th. G. F. GUBBIN.

SIR,—In his interesting article Dr. Parkes Weber directs attention to the changes which time may bring about in the nature of the diseases that a doctor may be called on to treat. We often hear of the part played by fashion in the theories and methods of the doctors, but we sometimes hardly recognize how much fashion plays in the etiology of the diseases they have to treat. We have evidence of the influence of fashion in the troubles produced by small boots and shoes, high heels, etc., and in the now well recognized forms of dermatitis from cheap furs; but it is well that Dr. Weber should have emphasized how recently there has been prevalent a form of erythema of the legs, due probably to the wearing of silk stockings, together with the fact that skirts are now worn short.

I personally have seen a good many cases, chiefly among girls of the working classes. The stockings worn by many of them are of the thinnest and flimsiest kind, with little heat-retaining qualities. The symptoms begin practically like chilblains, sometimes in localized patches, sometimes as a more diffuse hyperaemia or erythema, and if it continues a certain amount of induration is added to the congestion. The part of the leg affected is from the knee to the ankle, probably more frequently in front, but extending also round the limb, as described by Dr. Weber. It has been seen most frequently after a spell of cold, frosty, or damp weather, dampness having, I think, something to do with it as well as cold. It rapidly diminishes or disappears when the weather gets warmer. One probable cause of its aggravation I do not notice mentioned by Dr. Weber. I believe that it is often aggravated, if not actually produced, by the habit some girls have of sitting close up to the fire, letting the fire warm the fronts of their shins when they come indoors with chilled legs. Heating frozen skin undoubtedly aggravates, if it does not cause, chilblains, and this condition is practically a chilblain, and occurs in the same type of circulation liable to chilblains. It is much benefited or cured by wearing woollen stockings in cold weather, and the cure is hastened by resting at the same time.

With regard to chlorosis, one cannot but be struck with the great decline of its incidence in recent years. When I started practice, about forty years ago as an assistant in an industrial town, a large number of the girls one had to treat suffered more or less from a degree of chlorosis, and we know how common it was in hospitals in the days when I was house-physician. I believe that the great diminution in the number of cases has shown that probably fashion, in the form of the tight corset, as stated by Dr. Weber, had much to do with it. I remember, some time in the late eighties, Sir Andrew Clark pointed out how much constipation probably had to do with its causation, this constipation itself arising often from an undue modesty in girls who, after puberty, failed to develop the habit of seeking an opportunity for regular evacuation. The condition was very common among domestic servants, and probably their ill ventilated sleeping rooms had to do with this. In addition to giving up the tight corset the rapid growth of the cult of fresh air and healthy exercise in girls before the usual date of onset of chlorosis, as well as after, has had much influence. In those days girls, in developing into young ladies, became less and less free and natural in their life and movements. The diminution in chlorosis and the appearance of this erythema of the legs are therefore, at least in part, alike due to a change in the life and habits of girls.—I am, etc.,

Leith, May 30th. WILLIAM ELDER, M.D.

ULTRA-VIOLET LIGHT.

SIR,—Dr. P. Redington Peacock does me the honour of criticizing my letter published in your issue of June 6th. My communication was written with the intention of stimulating inquiry and provoking criticism, preferably from workers of experience in this field. The strictures I passed upon mercury vapour lamps in general are the result of my own experience as well as that of others. Perhaps when Dr. Peacock has got beyond the "experimental" stage to which he refers, and has gained some clinical experience, he will have cause to modify his present opinions.

He compares a paragraph which he has extracted from my book (p. 19) with another paragraph extracted from my letter, quite regardless of the context. If he will again refer to my book he will find that the quotation he makes is from a chapter headed "Heliotherapy," and refers to the action of sunlight and *not* to ultra-violet light.

In a new branch of therapy one is daily gaining knowledge and experience, and is therefore continually modifying one's views. Since I wrote my book I have given many thousands of exposures to hundreds of patients, and I feel I am now in a position to state categorically what a year ago I did little more than hint at. Dr. Peacock may rest assured, as also the members of the Royal Society of Medicine, that my conclusions are based entirely on the results of my own work and experience, and are quite independent of the work of others.—I am, etc.,

London, W.1, June 13th. PERCY HALL.

SIR,—I note that a correspondent advocates the use of the tungsten arc lamp as giving the best ultra-violet output. It is admittedly a good ultra-violet lamp, but so is the quartz lamp—and with this difference, that the

tungsten arc lamp costs £300 per 1,000 hours worked, while the equally efficient quartz lamp costs but £2 10s. for the same number of hours.—I am, etc.,

Brixham, June 13th. A. BLAKISTON.

A COMPARISON OF DRIED, EVAPORATED, AND FRESH COW'S MILK.

SIR,—Miss G. A. Hartwell, D.Sc., in her article on the comparisons of the feeding value of various milks (June 13th, p. 1073), states that the fresh cow's milk she used was bottled. The greater proportion of fresh cow's milk sold in London is pasteurized. Even if the milk used was not pasteurized the heating of it to 70° C. interferes with its properties.

The only guarantee of real fresh cow's milk is to purchase Certified, Grade A tuberculin tested, or Grade A milk, as these milks are issued under a licence from the public health authorities, and the date of milking is on every bottle.

In any case the conclusions drawn from these experiments are therefore based on cow's milk heated to 70° C., and not on fresh cow's milk.—I am, etc.,

C. MADDOCK, C.I.E.,
Reading, June 15th. Lieut.-Colonel I.M.S.

Medical Notes in Parliament.

[FROM OUR PARLIAMENTARY CORRESPONDENT.]

THE House of Commons debated the Finance Bill in Committee this week on Monday, Tuesday, and Wednesday, without making any large amendments.

The Medical Committee of the House of Commons on Monday night received a deputation from the Section of Anaesthetics of the Royal Society of Medicine, which came to discuss the difficulties arising from coroners holding inquests in all cases of death under anaesthetics, and from the publicity given by the press to such fatalities compared with that given to other deaths during or subsequent to operations. The deputation suggested that a scientific inquiry into death under anaesthetics might be more useful than an ordinary inquest. The Medical Committee asked the deputation to formulate specific proposals. During the discussion it was suggested that the anaesthetists should see whether a clause could be drafted for addition to the forthcoming Coroners Bill, and some members of the committee declared their belief that the publicity given to such mishaps was valuable.

It was mentioned that six medical members of Parliament were about to go to Geneva to see the preparation of M. Spahlinger's antituberculosis serum and to examine the records of its use. The Medical Committee will take no action until these members return and report. They are not making the journey as official representatives of the committee. The committee received a report that Dr. Fremantle and Sir Richard Luce had seen the War Secretary, Sir L. Worthington-Evans, and were in correspondence with him with regard to complaints of the failure of the Government to carry out its promises to the senior majors of the R.A.M.C., and also with regard to the causes underlying the shortage of candidates for commissions in the corps. Representations may later be made to the Army Committee of the House of Commons on the subject.

The Medical Committee agreed that arrangements should be made early next session for a meeting, to which the whole House would be invited by the Medical Committee, for the purpose of hearing a complete statement of the case for the efficiency of vaccination as a personal safeguard, this matter being kept separate from the case for compulsory vaccination. During a brief discussion on compulsion it was pointed out that the Parliamentary Labour Party, including those Labour members who are personally convinced of the efficacy of vaccination, is opposed to compulsory vaccination.

Bethlem Hospital Bill.—In the House of Lords, on June 16th, the Bethlem Hospital Bill was read a second time without a division. The bill authorizes the Corporation of the City of London to sell the site of the hospital, at present let at a nominal rent to the governors, and to use the proceeds to erect a new hospital on a large estate which has been acquired in Surrey, to the south of Croydon. The new site will afford space to put into operation the newer methods for the treatment of the insane for which the present site in Southwark affords no adequate opportunities.

Medical and Sanitary Administration in the Colonies.—Tables supplied to Colonel Angus McDonnell by the Colonial Secretary show that in 1901 Trinidad spent £18,926 on its staff of medical men and in 1924 £30,034. The total cost of administration of medical and sanitary services in 1901 was £76,947, and in 1924 £152,781. Hong-Kong in 1901 spent 30,155 dollars on its staff of medical men, and in 1924 170,246 dollars. Its total medical and sanitary expenditure in 1901 was 283,127 dollars, and in 1924 1,273,640 dollars. The Gold Coast spent £15,708 on its staff of medical men in 1901 and £63,165 in 1923-24, while its total medical and sanitary expenditure in the first year was £30,298 and in the second £236,506. In 1901 none of these colonies provided specially for medical research. In 1924 Hong-Kong set aside 59,341 dollars for it, and the Gold Coast £7,348 in 1923-24.

Small-pox in Colombo.—Answering Mr. Bromfield, on June 16th, Mr. Amery said that 629 cases of small-pox had been notified at Colombo during the period 1915 to 1924 inclusive, and 163 deaths had occurred. The available reports did not always particularize between vaccinated and unvaccinated cases, but of the 21 deaths which occurred in Colombo in 1920, the year in which there was the heaviest mortality since 1915, 3 occurred in children who had never been vaccinated and 16 in cases showing no evidence of primary vaccination, though they were said to have been vaccinated in childhood. Of the 24 cases which occurred in Colombo in 1923, 14 had no visible marks of vaccination and 8 were unvaccinated. No further particulars were at present available.

Drugs on Ships.—Mr. Lougher, on June 16th, asked the Minister of Health whether, in respect of the issuing of certificates to enable masters of vessels to replenish their supplies of drugs scheduled under the Dangerous Drugs Act, 1920, the forms necessary for granting certificates would be drawn up in such a manner as to be fully understood by the masters of foreign vessels; and whether more adequate arrangements would be made by the Ministry to facilitate the detection of concealed drugs upon foreign vessels entering the various ports of the United Kingdom. Mr. Locker-Lampson (Under Secretary to the Home Office) said that the regulation did not prescribe the use of any form. Under the regulation all that the master had to do was to apply to the port medical officer, who was authorized to give him a certificate for such quantity of drugs as might be needed until the ship next reached its home port. He had no reason for supposing the present arrangements to be inadequate.

Overdose of Strychnine.—On June 16th Colonel Day asked a question about a recent case at the Billericay isolation hospital, Essex, where a patient named Joseph Drage died as a result of the administration of an overdose of strychnine by a temporary unqualified nurse; and if he would take such action as would allow of only fully qualified nurses being allowed to administer poisonous medicines to patients undergoing hospital or institutional treatment. Sir Kingsley Wood (Ministry of Health) said that the Minister of Health had communicated with the Billericay Rural District Council, to whom the hospital belonged. He had no control over the internal administration of isolation hospitals, but was informed that the district council was taking all possible steps to prevent the recurrence of such a regrettable accident. Colonel Day asked whether the Minister of Health could enact that when unskilled persons had to dispense poisons the medicine could be made up in phials of one dose each. Sir Kingsley Wood replied that these cases were very occasional, and that the Ministry of Health had no power to make such regulations.

Vaccination.—The Minister of Health is awaiting a report from the Lambeth Board of Guardians into the case of twin girls, aged 10 months, who are alleged by Colonel Day to have been vaccinated shortly after admission to the institution, although the father had obtained a certificate of exemption from vaccination in respect of both children. Colonel Day further alleged that one child died after the inoculation, the other still being an inmate of the infirmary. The Colonial Secretary, Mr. Amery, informed Mr. Compton that although vaccination was compulsory in Southern Nigeria and might be enforced in particular areas of Northern Nigeria when deemed necessary, it was impossible to enforce the Ordinance strictly, and the vaccinations performed between 1913 and 1923 were only 1,890,237 in a population of over 18,000,000. Registration of deaths was not, and could not be made, compulsory, so the approximate number of deaths from small-pox could not be given. There died in hospital in Nigeria from small-pox 30 persons in 1919, 341 in 1920, 182 in 1921, 97 in 1922, and 44 in 1923, but these figures were known to bear no relation to the total mortality.

Trypanosomiasis.—Answering Sir Sydney Henn, Mr. Ormsby-Gore said the Colonial Secretary hoped that the proposals would be approved for the dispatch of an international scientific expedition to Uganda under the general direction of Dr. H. Lyndhurst Duke, of the East African Medical Service, to conduct further researches into the problem of the tsetse fly and into the medical side of the problem. The Colonial Secretary trusted it would prove possible to arrange a more comprehensive campaign for the destruction of tsetse fly in the British dependencies of tropical Africa on the lines contemplated in the report of the East Africa Commission.

Information on Birth Control.—The Minister of Health informed Mr. Thurtle that he had received a resolution recently passed by a conference of Labour women asking that medical officers at maternity centres should be allowed to give information on birth control to married women who desired it. He agreed with his

predecessors that institutions provided at the cost of public funds should not be used for so controversial a purpose without express directions from Parliament. He considered, however, that women attending maternity or infant welfare centres who, on medical grounds, appeared to need information on birth control should be referred to a private doctor or to a hospital.

Boron Preservatives.—Answering Mr. Whiteley on June 15th, Mr. Neville Chamberlain said that the harmfulness of boron preservatives was thoroughly considered by the Departmental Committee which inquired into the subject. Its report showed that boric acid in small doses had been known to produce ill effects, and that in continued doses it was likely to impair the health of the consumer.

Parasites of Insect Pests.—On June 15th, Mr. Cadogan asked whether the experiment of breeding beneficial parasites with a view to fighting insect plagues in our overseas dominions had proved a success. Mr. Ormsby-Gore (Under Secretary for the Colonies) replied that the Director of the Imperial Bureau of Entomology reported that during the eighteen months in which this experiment was being carried out two successful introductions of beneficial parasites were effected. A New Zealand parasite of the pear-slug was introduced from Nyasaland into Nigeria with a view to control of *Glossina tachinoides*, a species of tsetse fly prevalent in Nigeria. Two parasites of the earwig had also been introduced into New Zealand, but owing to difficulties in rearing them in the laboratory there the strains had died out. This work had been suspended, but it was hoped to resume it shortly.

Venereal Disease in the Straits Settlements.—On June 15th, in reply to Mr. Pethick-Lawrence, who asked whether the Legislative Council of the Straits Settlements had submitted a draft bill embodying any of the proposals of the committee appointed to investigate the spread of venereal disease there, which recommended in favour of the licensing and registration of all brothels by a Government official to be called the Controller, and the submission to a weekly medical examination of all prostitutes, Mr. Ormsby-Gore replied that a draft bill had been received from the Governor of the Straits Settlements, which embodied the proposals of the committee referred to. The bill had been under consideration by the Advisory Committee on Social Hygiene, and he was now awaiting its report.

Notes in Brief.

For advertisements of soap on the back of the current issue of notices of the requirement of vaccination, £135 was received. It is not intended to continue this means of raising revenue.

In 1923-24 the estimated gross expenditure of local authorities in England and Wales for milk for mothers and children was £383,900, and the estimated net expenditure £175,000.

In the first quarter of 1924 West Ham supplied 61,625 lb. of dried milk to mothers and children, but no liquid milk; Poplar, 3,733 lb. of dried milk and 139,974 pints of liquid milk; Birmingham, 17,772 lb. of dried milk, but no liquid milk.

The Government has decided to set up a Food Council as recommended by the Royal Commission on Food Prices.

Early steps are to be taken for the re-establishment of the Amani Institute in Tanganyika Territory, and for its upkeep as a centre of scientific agricultural research.

Commander Kenworthy has presented a petition from 1,606 residents in Brighton and Hove against vivisection.

On January 1st, 1924, 203,757 persons were in Poor Law institutions, of whom 19,965 were insane.

Officers of the Ministry of Health are giving constant attention to the question of providing separate accommodation for children outside workhouses where boards of guardians have not already provided this.

The Government cannot undertake legislation to enable the guardians to take legal proceedings, prior to the birth of an illegitimate child, against the putative father, for the expenses of the mother's confinement.

On June 15th, the Secretary for Air stated that no officer or airman would be allowed to carry out a practice parachute jump from an aeroplane until he possessed considerable air experience. It was clearly laid down in regulations that such jumps were only to be made by volunteers.

The Home Secretary informed Colonel Day that he is looking into the police regulation which, when a person is in custody on a charge of being drunk while in charge of a motor car, does not permit that person to be examined by a doctor called by anyone other than himself.

No issues of medical importance have yet been raised in Grand Committee on the Public Health Bill.

No reputed cure for tuberculosis in cattle has been submitted to the Government for testing.

In the recent outbreak of poisoning in the York and Lancaster Regiment at Cologne no soldiers died. The War Office is awaiting a report.

On January 1st last 10,489 children were boarded out by Poor Law authorities in England and Wales. Ten women inspectors are supervising.

Obituary.

WE regret to record the death of Dr. SAMUEL DODD CLIPPINGDALE, who before his retirement had practised for many years in Kensington, and was a familiar and respected figure in London medical circles. He was educated at the University of Aberdeen and the London Hospital, and obtained the diploma of M.R.C.S. in 1875. He graduated M.B., C.M.Aberd. in 1876, and M.D. in 1879, and became F.R.C.S.Eng. in 1880. He had served as prosector at the Royal College of Surgeons and house-physician to the London Hospital, and was for a considerable period surgeon to the Kensington Dispensary and Children's Hospital. Dr. Clippingdale was a diligent student of historical and antiquarian matters. He had held office as president of the West London Medico-Chirurgical Society, and was a former vice-president of the Section of Balneology and Climatology of the Royal Society of Medicine. His medico-literary turn of mind and the industry with which he worked up historical material were shown in the papers he published in the BRITISH MEDICAL JOURNAL. These were a Medical Roll of Honour of Physicians and Surgeons who remained in London during the Great Plague, which appeared in 1909; a Medical Parliamentary Roll, 1558-1910, published in the following year; and an article on Medical Baronets, 1654-1911, published in 1912. He contributed also to the *London Hospital Gazette* a large number of biographical sketches of past members of the medical and surgical staffs of that institution, and had published several papers on the climatology of London and its environs.

Dr. WILLIAM LESLIE, who died in Edinburgh on May 29th, was born in 1865. He received his medical education at Edinburgh, graduating M.B., C.M. in 1894, and proceeding M.D. in 1907. Dr. R. A. Fleming writes: His love of surgery induced Dr. Leslie to become a Fellow of the Royal College of Surgeons of Edinburgh in 1908, and as one of the surgeons to the Clackmannan Hospital his surgical dexterity had free and successful scope. He practised in Alloa for thirty years, where he speedily acquired a large and ever-increasing practice. Dr. Leslie will be long remembered, not merely for his professional skill, but also for the friendship and for the confidence inspired in his patients. For a long time he had suffered from the effects of high blood pressure, unquestionably due in part to the anxious solicitude he bestowed on his patients. A severe attack of pneumonia subsequently necessitated his retirement for a prolonged rest. He had come to Edinburgh for medical advice, when his death from angina pectoris occurred with tragic suddenness. Our sympathy in full measure goes out to his widow, whose care and devotion enabled Dr. Leslie to continue his work in spite of considerable and increasing physical difficulty. Dr. Leslie was laid to rest at Alloa on June 2nd, among those whom he had so long served as physician and friend.

Dr. JOHN KENDALL, who died on May 22nd at Coniston, Lancashire, at the age of 71, came of a well known local family, the Kendalls of Cockenshell, Blawith. Dr. Kendall was educated at Anderson College, Glasgow, and obtained the diplomas L.R.C.P. and S.Ed. and L.M. in 1875. After filling the appointment of house-surgeon at the Glasgow Royal Infirmary he began practice in Coniston. He was a member of the British Medical Association and was a justice of the peace for Lancashire. A colleague writes: Dr. Kendall belonged to the finest type of country practitioner. He had a wide experience of the surgery of accidents, particularly in connexion with the quarries on "Coniston Old Man" and "Tilberthwaite," and there are many men now walking about Coniston sound in health who have to thank him for his skill and devotion. He was a loyal friend and true colleague; no petty thought ever came into his mind. He was the soul of honour, and his devotion and kindness to his patients set a fine example to his fellow practitioners. That this was appreciated was well shown by the large number of sorrowing friends who attended the funeral on May 25th at the little church where he had been for many years churchwarden. Dr. Kendall retired

about eighteen months ago, since he found the work becoming rather too much for him in what is, geographically, probably one of the most difficult practices in England. Even in his retirement he took a lively interest in the affairs of the village where he had been in practice for forty-eight years. He leaves a widow, two daughters, and a son (in the medical profession) to mourn his loss.

Medico-Legal.

ALLEGATIONS OF NEGLIGENCE REBUTTED.

INMAN *v.* TANNER.

IN a High Court action, brought on May 20th and 21st by Mrs. Nina Inman of Bayswater against Mr. Herbert Tanner, F.R.C.S., for damages under Lord Campbell's Act, on the ground that the death of her son, Cecil George Inman, aged 24, was due to the negligence of Mr. Tanner, the special jury, after hearing Mr. Tanner's evidence, stopped the case and gave a verdict in his favour, the Lord Chief Justice adding that he entirely concurred in the verdict.

The deceased was a panel patient, and, prior to the hearing of the case in the High Court, Mrs. Inman's complaint was dealt with under the National Insurance Acts. The Medical Service Subcommittee—the medical members, however, recording their disagreement—found the case proved against Mr. Tanner, and severely censured him, and Mr. Tanner's appeal to the Ministry of Health was dismissed—save in respect of one particular finding of fact—the Ministry stating that the question of the sum to be deducted would be deferred until after the hearing of the High Court action. An officer of the Ministry present at the hearing of the appeal was also present at the hearing in the High Court. The Ministry has not yet made its decision known.

The case against Mr. Tanner was that he diagnosed a case of diabetes mellitus as one of cerebro-spinal meningitis and so failed to treat the deceased properly; that he failed to visit the deceased one night when informed of the patient's condition; and that he did not make any examination of the deceased's urine; further, that he failed (*a*) to make or cause to be made a lumbar puncture or examination of the spinal fluid, (*b*) to examine the optic discs, (*c*) to give sodium salicylate or potassium sulphite, (*d*) to give Flexner's antimeningococcic or any other serum, (*e*) to order a sufficiently low or liquid diet.

Sir Reginald Coventry, K.C., and Mr. Eric Sachs (instructed by Messrs. Judge and Priestly) appeared for the plaintiff, and Mr. J. A. Hawke, K.C., and Mr. T. F. Davis (instructed by Messrs. Bulcraig and Davis) appeared for the defendant, who denied negligence and damage.

The plaintiff's evidence was to the effect that her son had not been well from January, 1924, and first visited Mr. Tanner on April 14th, 1924. He was getting thin, passed much urine, and was very thirsty. After a few surgery visits the deceased grew worse, and was visited at his home by Mr. Tanner on May 10th, 12th, and 14th. She showed Mr. Tanner the quantity of urine passed in a night, and she said the doctor said it was normal. On May 10th Mr. Tanner certified the deceased to be suffering from bladder irritability, and ordered him to be kept warm and to be given a little nourishing diet, not much meat. On May 12th her son went "boss-eyed." On the night of May 14th Mr. Tanner was informed that the patient was sick, and he ordered that ice be sucked and soda water drunk, adding that he would call in the morning. She agreed that the doctor was not asked to call that night. The deceased, however, became unconscious late that evening, and Dr. Goldfoot was called in. He diagnosed diabetic coma, and sent the deceased to Paddington Infirmary, where he was treated with insulin. To this treatment there was no response, and death occurred at 2 a.m. on May 16th, 1924.

Dr. Goldfoot, in his evidence, said that polyuria, glycosuria, and wasting were signs of diabetes, but that sugar in the urine could be present from meningitis, and that as (1) the doctor had examined the urine on April 23rd or April 28th and found no sugar, (2) there was no reaction from the injection of insulin, (3) the deceased had gone "boss-eyed," it was reasonable for Mr. Tanner to come to the conclusion that the deceased was suffering from meningitis.

Dr. Conolly, resident medical officer at the Paddington Infirmary, said he certified the cause of death to be diabetes mellitus. A *post-mortem* examination was made, but the brain and spinal cord were not examined. A specimen of the urine was taken, and showed sugar present. The presence of sugar was not conclusive of diabetes, and when he gave the death certificate he was not aware that the deceased had gone "boss-eyed." Coupling that fact with the lack of response to insulin, there was a possibility of cerebral trouble.

Dr. A. S. Woodwark said if Mr. Tanner examined the urine and found no sugar, and was unaware of polyuria and great thirst and wasting, he was quite reasonable in excluding diabetes. Sugar could be present in the urine from brain trouble, and in diabetes there was generally a response to insulin treatment.

Mr. Tanner, in his evidence, said that on April 23rd or April 28th he examined the urine and got no reaction for sugar. The patient was dull and lethargic, but he found no signs of wasting. The urine passed in one night was normal, both in quantity and colour. He was not surprised at the fact that the deceased was a little thirsty, because he had been prescribing diuretics. By May 14th he was very suspicious that the case was cerebro-spinal meningitis, and decided that if there were no change by May 15th he would send the deceased to hospital. On calling the next day he found the deceased had been removed. He was still of opinion that the deceased did not die of diabetes mellitus, but from meningitis.

Before the hearing in the High Court, the Ministry of Health, in dismissing Mr. Tanner's appeal to it, said:

"We cannot escape from the conclusion that the presence of diabetes mellitus was excluded upon insufficient grounds, and, further, that, having regard to the very serious suspicions present in his mind, Dr. Tanner was at fault in omitting to take active steps either to confirm or dispel them. While we fully recognize the frequent necessity for keeping a doubtful case under observation, we feel that the period of observation, pure and simple, unaccompanied by active investigation, should be kept within reasonable limits, and that in this case even if Dr. Tanner had not recognized the need earlier, yet in view of his serious suspicions the onset of an increasingly acute condition on and after May 10th should have indicated the urgent necessity of making an immediate attempt to clear up the real nature of the case by all available means (for example, further tests of urine, lumbar puncture, examination of the optic discs, second opinion, removal to hospital). The failure to take any of these courses, some of which, as the doctor's own evidence showed, he had in mind, constitutes, in our opinion, something more than an error of judgement on his part."

They did not think the fact of the patient being sick, without the disclosure of the fact that the patient was also in a state of coma, was sufficient ground for the allegation that the doctor refused to respond to a summons for help on the night of May 14th.

"On the other hand, we agree in this respect with the view taken by the subcommittee, that whatever the terms of the message the doctor should have gone to the patient. . . . The peculiar significance attaching to a lethargic condition in diseases of the central nervous system is, in our view, an additional reason for his responding to a message which gave any indications of the onset of fresh symptoms whatever its terms."

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE Professor of Anatomy has reappointed Dr. A. B. Appleton, Mr. D. G. Reid, Mr. A. Hopkinson, and Mr. V. C. Pennell as demonstrators of anatomy.

The congregation for conferring degrees in medicine and surgery has been postponed from July 14th to Tuesday, July 21st.

UNIVERSITY OF BRISTOL.

AT a congregation held on June 9th, in connexion with the opening by H.M. the King of the new University buildings, the Chancellor (Viscount Haldane) presiding, a number of honorary degrees were conferred. Among these was the LL.D. on Sir George Oatley, architect of the new building; the D.Litt. on Sir Henry Hadow, Vice-Chancellor of Sheffield University; and the D.Sc. on Sir Richard Gregory, F.R.S., Editor of *Nature*, and Sir John Herbert Parsons, F.R.S., F.R.C.S., both natives of Bristol.

UNIVERSITY OF MANCHESTER.

THE Council of the University has accepted the resignation of Dr. J. M. W. Morison, lecturer in applied anatomy, on his appointment to the lectureship in radiology in the University of Edinburgh.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council meeting was held on June 11th, when the President, Sir John Bland-Sutton, was in the chair.

The congratulations of the Council were offered to the President on having received the honour of a baronetcy and to Sir James Berry on having received the honour of knighthood on the occasion of His Majesty's birthday.

Diploma of Fellowship.

Mr. J. Basil Hall, President of the British Medical Association, was introduced and admitted a Fellow of the College.

Diplomas of Fellowship were granted to the following twenty-four candidates:

A. C. B. Biggs (Univ. Coll.), G. O. Chambers (St. Bart's), V. R. Mirajkar, I.M.S. (Bombay and St. Bart's), C. M. Brophy (Univ. Coll. and St. Bart's), K. N. Purkis (Guy's), J. D. M. Cardell (St. Thomas's), R. C. Shaw (Manchester), G. Armitage (Leeds), G. M. F. Barnett (Otago and Middlesex), B. L. Laver (Guy's), F. Hudson (Univ. Coll.), C. M. Pearce (St. Bart's), M. M. Riad (Cairo and St. Bart's), N. F. Adeney (Camb. and St. Mary's), H. K. Christie (Otago and Guy's), J. R. Nicholson-Lailey (Bristol and Lond.), M. Geaney (Sydney and Guy's), C. A. Wells (Liverpool), J. B. Oldham (Liverpool), C. C. Coghlan (Sydney and Guy's), W. M. Cotter (Otago and St. Bart's), J. A. James (Sydney and Guy's), A. Rugg Gunn (Edin. and St. Mary's), M. P. Susman (Sydney and St. Bart's).

Lectures and Demonstrations.

The following Professors and Lecturers were appointed for the ensuing year:

Hunterian Professors.—Sir Arthur Keith: Six lectures on the Evolution of the Higher Primates. Arthur Edmunds, C.B.: One

lecture on Pseudo-hermaphroditism and Hypospadias and their Surgical Treatment. J. E. Adams: One lecture on the Surgery of the Jejunum. E. Musgrave Woodman: One lecture on Malignant Disease of the Oesophagus. A. Tudor Edwards: One lecture on the Surgical Treatment of Phthisis and Bronchiectasis. A. Lawrence Abel: One lecture on the Treatment of Cancer of the Oesophagus. Hugh William Bell Cairns: One lecture on Neoplasms of the Testicle.

Arris and Gale Lecturers.—Stanford Cade: One lecture on Cholecystography. Alfred Piney: Two lectures on the Importance of Haematology in Surgery.

Erasmus Wilson Lectureship.—Clement E. Shattock: Six demonstrations on Surgical Pathology.

Arnott Demonstratorship.—Sir Arthur Keith: Six demonstrations on the contents of the Museum.

Board of Examiners.

The following were elected as Members of the Board of Examiners in Anatomy and Physiology for the Fellowship for the ensuing year:

Anatomy: William Wright, Frederick Gymer Parsons, Wilfred Edward Le Gros Clark, Cecil P. G. Wakeley. *Physiology:* John Mellanby, David Henriques de Souza, Ffrangcon Roberts, John B. Leathes.

The following were elected examiners under the Examining Board in England for the ensuing year:

Elementary Biology: Thomas William Shore, James P. Hill. *Anatomy:* Henry A. Harris, Oscar S. Hillman, John Basil Hume. *Physiology:* Charles A. Lovatt Evans, George A. Buckmaster. *Midwifery:* Charles H. Roberts, Eardley L. Holland, Donald W. Roy, Harold B. Whitehouse. *Diploma in Public Health:* Part 1, Richard Tanner Hewlett; Part 2, Francis J. Stevens. *Diploma in Tropical Medicine and Hygiene:* Bacteriology, William P. MacArthur; Diseases and Hygiene of Tropics, Philip H. Manson-Bahr. *Diploma in Ophthalmic Medicine and Surgery:* Part 1, Sir John Herbert Parsons, Charles B. Goulden; Part 2, Malcolm L. Hepburn. *Diploma in Psychological Medicine,* Frederick L. Golla. *Diploma in Laryngology and Otology:* Part 1, Herbert Tilley, Arthur H. Cheatle; Part 2, Herbert J. Marriage. Messrs. C. H. Fagge, L. B. Rawling, H. S. Clogg, H. Lett, and T. P. Legg were elected members of the Board of Examiners in Dental Surgery for the year ending June 30th, 1926. The following were elected as additional members of the Dental Section of the Board of Examiners in Dental Surgery: Ernest Blair Dowsett, D.S.O., Arthur Thomas Pitts, D.S.O. Mr. Graham Simpson of Sheffield was elected a member of the Court of Examiners in the vacancy occasioned by the resignation of Mr. A. P. Dodds-Parker.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT the June meeting of the President and Fellows the following were admitted Licentiates and Members of the College: C. A. Nadicarianda, J. S. Quin.

The Services.

INDIAN MEDICAL SERVICE.

Warrant Governing Age of Retirement of D.M.S.

WITH reference to Army Department Notification No. 2649, dated August 15th, 1919, the Governor-General in Council directs the publication of the following Royal Warrant, dated March 17th, 1925, regarding the age for compulsory retirement of an Indian Medical Service officer holding the appointment of Director, Medical Services in India:

George R.I.
Royal Warrant.

Whereas we deem it expedient in the interests of the Service to make the following change as to the age at which officers of Our Indian Medical Service holding administrative appointments shall be placed on the Retired List.

Our Will and Pleasure is that an officer of Our Indian Medical Service holding the appointment of Director of Medical Services in India shall be placed on the Retired List on attaining the age of 60.

Our Warrant dated 13th June, 1919, shall be amended accordingly.

Given at Our Court, at St. James's, this 17th day of March, 1925, in the fifteenth year of Our Reign.

By His Majesty's Command.

(Sd.) BIRKENHEAD.

DEATHS IN THE SERVICES.

THE LAST MEDICAL SURVIVOR OF THE INDIAN MUTINY.

Deputy Surgeon-General Philip Warren Sutherland, Bengal Medical Service (ret.), died in London on June 6th, aged 93. He was the son of Adam Sutherland, surgeon, of Hayes, Middlesex, and was educated at King's College Hospital. After taking the M.R.C.S. in 1853, he entered the I.M.S. as assistant surgeon in May, 1854. He attained the rank of deputy surgeon-general in December, 1883, and retired on February 5th, 1889. He served in the Indian Mutiny in 1857-58, and received the medal. His whole service was spent in military employ, winding up with five years as assistant medical officer of the Lahore Division. Since the death of Deputy Surgeon-General Clarence Cooper, eighteen months ago, Sutherland had been the senior member of the I.M.S. retired list. That distinction now falls to Surgeon-General Henry Cook, of the Bombay Service. More interesting, however, is the fact that Sutherland appears to have been the last medical survivor of the Mutiny. There are still two retired officers of the I.M.S living who were in India during the Mutiny—Surgeon-General H. Cook and Surgeon-Major A. Gamack—but neither of them served in the field during the campaign. The last surviving Mutiny veteran of the Army Medical Department seems to have been the late Surgeon-Major A. E. T. Longhurst, who died on March 20th last.

Lieut.-Colonel Alfred Henry Williams, Bengal Medical Service (ret.), died at Eastbourne on May 20th, aged 78. He was the son of the late Henry Williams of Longford, and was educated at Aberdeen, where he graduated M.B. and C.M. in 1871, and at St. Thomas's, taking the M.R.C.S. in 1872. He entered the I.M.S. as assistant surgeon in March, 1872, became lieutenant-colonel after twenty years' service, and retired in 1897. His entire service was spent in military employment, for the greater part of the time in the 9th Bengal Infantry, one of the Company's old "Paredy" regiments, which was disbanded in 1884, and re-raised as a Gurkha battalion. With the 9th he served in the Afghan war in 1880, and received the medal.

Captain Cyril Armand Bernard, *M.C.*, R.A.M.C., died suddenly at Cologne on May 10th, aged 36, while acting as wicketkeeper in a cricket match. He had joined at Cologne, from India, only five days before. He took the diplomas of L.R.C.P. and S.Ed. and L.R.F.P.S.G. in 1914. He received a temporary commission as lieutenant R.A.M.C. on August 12th, 1914, just a week after war was declared, became captain after a year's service, and took a permanent commission on February 12th, 1918. He served in the recent great war, was mentioned in dispatches in the *London Gazette* of September 22nd, 1916, and received the Military Cross on that date.

Medical News.

THE report of the Commanding Officer of the Corps of Commissionaires, presented to the annual meeting of the governors on June 13th, contained a reference to the death of Dr. Haslip last November. In him the corps, it was said, had lost a medical officer whose exceptional qualities as a physician and a friend of admirable judgement had been of the highest value to the corps for thirty years.

THE Albert medal has been awarded by the Council of the Royal Society of Arts to Lieut.-Colonel Sir David Prain, C.M.G., C.I.E., F.R.S., I.M.S.(ret.), "for the application of botany to the development of the raw materials of the empire." The medal was instituted in 1863 by the society as a memorial of the Prince Consort, who was its president for eighteen years, and is awarded annually "for distinguished merit in promoting arts, manufactures, and commerce."

IN order to draw the attention of overseas visitors to its appeal for the Nurses' Home as a memorial to the nurses of the overseas nursing services who died in the war, the Elizabeth Garrett Anderson Hospital is showing a modern operating theatre in the Palace of Transport and Housing at the Wembley Exhibition. We have already mentioned that the names of ninety-seven overseas nurses will be inscribed in the home, and that donations may be sent to the Dowager Marchioness of Dufferin and Ava at the hospital, 144, Euston Road, London, N.W.1.

AN assembly of the Faculties of University College, London, will be held on Thursday, July 2nd, at 3 p.m., when the Duchess of Atholl, M.P., Parliamentary Secretary to the Board of Education, will receive the scholars, medallists, and prizemen, and will give an address. Afterwards the new anatomy and physiology building, the engineering extension, the Bartlett School of Architecture, the College libraries, and Professor Sir Flinders Petrie's exhibition of recent discoveries of the British School of Archaeology in Egypt will be open to inspection.

THE annual prize-giving at the London (Royal Free Hospital) School of Medicine for Women will take place on Thursday, June 25th, at 3.30 p.m. The ceremony will be followed by tea in the garden.

THE annual meeting of the Tuberculosis Society will be held on Tuesday, July 7th, at Pritchard's Restaurant, 79, Oxford Street, London. It will be preceded by a dinner at 5s. 6d. a head. Full information can be obtained from the honorary secretary, Dr. Frederick J. C. Blackmore, 138, Herbert Road, Woolwich, S.E.18.

THE Liddle triennial prize of the London Hospital Medical College will be awarded next year for the best essay on the etiology and treatment of primary high blood pressure. The essays in competition must be delivered at the hospital not later than January 30th, 1926.

IN connexion with the visit of the American medical practitioners to London an illustrated booklet was prepared containing a description of the Brompton Hospital for Consumption, and of its sanatorium at Frimley. This contains a short history of the development of the hospital and a detailed account of its activities.

THE bicentenary of Guy's Hospital and the centenary of the Medical School both fall this year. On Monday, June 29th, the Duke of York will visit the hospital and distribute the prizes to successful students. The laboratories, museums, the college, the nurses' home, and the wards will be open to inspection after the ceremony.

THE Fellowship of Medicine announces that Dr. A. F. Hurst will give a lecture on Friday, June 26th, at 5.30 p.m., in the West Lecture Hall, No. 1, Wimpole Street, on the treatment of cholecystitis and the prevention of gall stones. From June 22nd to July 4th the London Temperance Hospital will hold a special course from 4.30 in the afternoon, for the convenience of those in general practice; fee, £1 1s. A course in urology has been arranged by the St. Peter's Hospital from June 29th to July 25th. The Queen's Hospital for Children has organized a two weeks' course from July 6th to 18th. A course in the diagnosis and treatment of nervous diseases will be given at the West End Hospital (out-patient department, 73, Welbeck Street) from July 27th to August 15th. Other special courses in August are a vacation course at the Prince of Wales's General Hospital, Tottenham, from August 3rd to 15th, a fortnight's intensive course at the Queen Mary's Hospital (Stratford), and a urology course, continuing throughout the month, at the All Saints' Genito-Urinary Hospital. Copies of the syllabuses and the programme of the Fellowship of Medicine may be obtained from the Secretary at No. 1, Wimpole Street.

THE next meeting of the Anaesthetic Section of the Royal Society of Medicine will be held at Manchester on Saturday, June 27th, in the Physiological Lecture Room of the University. A discussion on chloroform will be opened by Dr. H. P. Fairlie, and Mr. S. R. Wilson and Dr. S. McSwiney will give a demonstration on the effects of adrenaline injections during ether and chloroform anaesthesia. In the laboratories an exhibition will be arranged of physiological methods of investigating acidosis, and of new apparatus for anaesthesia.

SOME time ago (April 25th, p. 811) we announced that the next Voyage d'études médicales to the health resorts of France (organized solely for the medical profession) would take place in September. It has now been arranged that the party shall meet at Vittel at 5.30 p.m. on September 2nd, and during the subsequent thirteen days visit Contrexéville, Martigny-les-Bains, Bourbonne-les-Bains, Bains-les-Bains, Plombières-les-Bains, Luxeuil-les-Bains, Bussang, Gerardmer, La Schlucht, Münster, Colmar, Soulzbach and Soulzmatt, le Linge, les Trois Epis, Aubure, Ribeauvillé, Chatenois, Barr, Sainte-Odile, le Hohwald, Schirmeck, Strasbourg, Niederbronn, Morsbronn, Luxembourg, Mondorf, Thionville, Sierck-les-Bains, Spa, Nancy-Thermal, Sermaize-les-Bains. The cost has been fixed at 1,150 francs, which includes all expenses throughout the voyage. English doctors desirous of participating are asked to communicate without delay with Madame M. C. Juppé-Blaise, representative of the French Spas, at the Office Français du Tourisme, 56, Haymarket, S.W.1.

THE fortieth Balneological Congress was held at Carlsbad, Marienbad, and Franzenbad from April 3rd to 8th under the presidency of Professor Dietrich of Berlin. After an address by the general secretary, Dr. Hirsch, on the German Balneological Society, which now contains 750 members, the following papers, among others, were read: the experimental pharmacology of mineral springs, by Professor W. Wiechowski; combined therapy, by Professor A. Strasser; the influence of radio-activity on metabolic processes in the animal and vegetable world, the effect of baths on the gases of the blood, by Dr. E. Freund; the treatment of diabetes, by Professor von Jaksch-Wartenhorst; the effect of diet cures on hypertension, by Dr. F. Wagener; modern humoral pathology and balneology, by Dr. B. Aschner; the complications of obesity, by Dr. E. Tuszkai; and arterio-sclerosis and cardiac failure, by Dr. A. Selig. At the termination of the proceedings it was decided to found a new monthly journal, entitled *Archiv für Balneologie und Klimatologie*. The next balneological congress will be held at Aix-la-Chapelle in April, 1926.

THE Société Française Nationale de Chirurgie has awarded the quinquennial Lannelongue prize, consisting of a gold medal and 5,000 francs, to Dr. George Crile of Cleveland.

ON June 10th Commemoration Day was held at Livingstone College. There was a good attendance, including Sir George Makins, G.C.M.G., Dr. Manson-Bahr, Dr. Whitfield Guinness, and Dr. J. H. Cook. The chair was taken by Dr. Andrew Balfour, C.B., C.M.G., Director of the London School of Hygiene and Tropical Medicine. The Principal, Dr. Tom Jays, made a short statement as to the financial position of the College, showing that about £800 is needed in order to close the current financial year without a deficit. He showed that the need is for more students; if they are forthcoming the financial needs are small, but owing to the lessened numbers entering since the war, and also to much extra necessary expenditure, the financial burden is heavy. He spoke of the world-wide influence of Livingstone College, the students of which are now scattered in almost every part of the globe. Dr. Balfour said that what had impressed him extremely in his knowledge of the work of Livingstone College was the way in which the students were trained in persistency in their studies and work. In addition to learning something of medicine and surgery, the students also learnt preventive work in hygiene as applied to tropical disease. The Rev. H. Wakefield (Calabar, West Africa) said he had often wondered what would happen if Old Livingstonians all the world over were to send their testimonies of what Livingstone College had done for them. It would not be a story of increased salaries, of promotion to the heads of departments, but a story of gigantic struggles against disease and squalor. Mr. F. Kilbey (Central Provinces, India), a student of the first session, told of his thirty years' work in the mission field and of the work he had been enabled to do through the knowledge he had gained. He had been able to do much in preventing the spread of disease, in outbreaks of plague and cholera, and had alleviated many cases of eye diseases.

THE *Giornale Italiano delle malattie venere e delle malattie della pelle* has changed its title to *Giornale Italiano di dermatologia e sifilologia*.

A DISCUSSION will be held on hereditary syphilis on the occasion of the Congress of the Association of French Gynaecologists and Obstetricians in the first week in October, when the following papers will be read: latent hereditary syphilis, introduced by MM. Leredde, Lesné, Devraigne, and Carle; treatment of syphilis during lactation and early infancy, introduced by MM. Marcel Pinard, Lemaire, and Péhu; preventive treatment of hereditary syphilis, introduced by MM. Milian, Lévy, Spillmann, Solal, and Petges. Further information can be obtained from the French National League against the Venereal Peril, 7, Rue Mignot, Paris VI^e^.

THE forty-ninth session of the French Association for the Advancement of Science will be held at Grenoble from July 27th to August 1st, under the presidency of Professor J. Teissier of Lyons, when the question of duodenal ulcer will be discussed. Further information can be obtained from Professor Teissier, 108, Chemin d'Alaï, Lyons.

Letters, Notes, and Answers.

All communications in regard to editorial business should be addressed to ***The EDITOR, British Medical Journal, British Medical Association House, Tavistock Square, W.C.1.***

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the BRITISH MEDICAL JOURNAL must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the JOURNAL, should be addressed to the Financial Secretary and Business Manager.

The ***TELEPHONE NUMBERS*** of the British Medical Association and the BRITISH MEDICAL JOURNAL are *MUSEUM 9861, 9862, 9863,* and *9864* (internal exchange, four lines).

The ***TELEGRAPHIC ADDRESSES*** are:

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The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 4737 Dublin), and of the Scottish Office; 6, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 4361 Central).

QUERIES AND ANSWERS.

SOURED MILK.

"G. B." writes to ask where he can obtain lactic acid (Bulgarian) bacilli; also for directions how to prepare the milk from day to day, and how often and how much should a patient be given, and at what hours.

*** To prepare a suitable soured milk it is necessary to start with a good milk supply, as the resultant junket, in great measure, depends upon the quality of the milk. For the sake of safety it is desirable to bring the milk to the boil and to cool down rapidly, thus ensuring an adequate freedom from extraneous organisms. A good commercial lactic acid bacillus tablet, or a liquid culture, is then employed to inoculate the milk, and after carefully covering the vessel incubation is conducted for a period

of time of about eight to ten hours. A bacteriological incubator is hardly necessary in this instance, as a fairly wide range of temperature is quite successful for the purpose. The optimum temperature of growth of the organism is about 44° C. (110° F.). If desired, the time of incubation can be extended a little, thus increasing the acidity; this, in great measure, is a matter of taste. The soured milk so obtained is taken either with sugar or with added cream and sugar as an article of diet, almost according to appetite. Some add a little powdered cinnamon or ginger as flavouring. Full details of the procedure will be found in Martindale and Westcott's *Extra Pharmacopoeia*, eighteenth edition, vol. i. We understand that the firm of W. Martindale, 10, New Cavendish Street, W.1, makes a lactic acid bacilli tablet under the name "trilactine," which gives good results.

LETTERS, NOTES, ETC.

VOMITING TREATED BY SALT AND WATER.

THE oral administration of a 2 per cent. solution of sodium chloride in water was found by Drs. E. P. Lehman and H. V. Gibson (*Journ. Amer. Med. Assoc.*, April 25th, 1925, p. 1259) to be a remarkably satisfactory treatment for vomiting occurring in shock, after operations for appendicitis, cholecystectomy, reduction of fractures, laparotomy, and in various conditions, including pregnancy and globus hystericus. Amounts varying from 15 drachms to 8 ounces were given at a temperature that felt cold to the patient's mouth, and the relief of symptoms, though sometimes transient, was usually rapid and pronounced. The authors add that an important contraindication is nephritis with oedema, signifying chloride retention: an overdose must be avoided in any case, on account of the danger of producing diarrhoea. They recommend the more extensive trial of this simple remedy.

POISONING BY POTASSIUM CYANIDE.

DR. G. PIOTROWSKI (Geneva) writes: The letter of "J. B. S." concerning a case of poisoning by potassium cyanide (BRITISH MEDICAL JOURNAL, January 17th, p. 144) reminded me of a case I had a few years ago which has not been published. A man was sent to the hospital at 9.30 p.m., nearly unconscious. The face was very pale and the breathing shallow, knee-jerks brisk, pin-point pupils with sluggish reactions; the pulse was good and regular. The son of the patient told me that, at about 8.45 p.m., his father had swallowed a paste containing potassium cyanide. The analysis of a sample of this paste showed the presence of a large quantity of potassium ferrocyanide, much less of caustic potash and potassium sulphocyanide, and about 1 per cent. of potassium cyanide. The amount swallowed was the size of a walnut. Immediately after the ingestion the patient complained of giddiness, burning in the stomach, and vomited. We injected at once hypodermically 1/64 grain of atropine, and at 9.50 p.m. 40 c.cm. of a 20 per cent. solution of sodium thiosulphate intravenously, with again 1/64 grain of atropine hypodermically. The patient vomited again two or three times (we found in the vomited fluid the presence of potassium cyanide). Little by little he became more conscious, and the next morning only complained of headache, burning in the stomach, and diarrhoea. He left the hospital ten days afterwards. The case was not severe; the patient had vomited at least four times; the potassium cyanide was mixed with other substances, but the quantity ingested was certainly about 20 grains. I wish to draw attention to the use of sodium thiosulphate advocated in 1895 by Lang (*Arch. f. exper. Path. u. Pharmakol.*, 36) and afterwards by Teichmann and Nagel (*Biochem. Zeit.*, 93, p. 312) and by Schankie (dissert., Königsberg), 1918. Flury and Heubner (*Biochem. Zeit.*, 95, p. 249), on the contrary, think that the treatment is useless in bad cases, and that of the others a certain number recover without any treatment, and that it is difficult to ascertain the part played by the treatment. I think, however, that in cases of poisoning by potassium cyanide especially, intravenous injections of a 20 per cent. solution of sodium thiosulphate, as used by Ravaut for desensitization (2e Congrès Derm. et Syph. de la langue française, 1923: Spillman, p. 65), should be tried as soon as possible (50-70 c.cm.).

LONDON'S FRUIT AND VEGETABLES.

IN his Chadwick Lecture, given at the Chelsea Physic Garden on June 11th on the sources of the fruit and vegetable supply of London, Sir Daniel Hall, K.C.B., F.R.S., said that London owed its earlier supplies to the settlement of refugees from Flanders and France. To-day supplies are drawn from world-wide sources. The home-grown apple season is chiefly August to the end of October; later a few are obtained from cold store. Soon after the English supply begins American apples from the Pacific slopes follow. Later come apples from the Atlantic seaboard and the Canadian crop from Nova Scotia, Ontario, and British Columbia. As the American supply begins to fall off in the spring the tale is taken up by arrivals from Western Australia, Tasmania, and New Zealand. The cherry season opens with arrivals from France, round Angers; Kent, the great home source, is followed at a long interval by Worcester and Bucks. Plums come from France in July; English supplies begin in August from Kent, Worcester, and the Wisbech area; distant stocks arrive from California, Bohemia, and South Africa. Strawberries are all home grown and amount to about a million hundredweight. Nearly 12 million bunches of bananas reach this country from the Canary Islands, West Indies, and Central America; of the 8 million hundredweight of oranges the bulk are from Spain; and nearly a million hundredweight of lemons come from Spain and Italy. The home production of potatoes is about 3 million tons, imports being about 5 per cent. of the whole supply, mostly "earlies." The season opens with new potatoes from Egypt, Malta, the Canary Islands, and Spain. The earliest English begin in May from the Scilly Islands, followed shortly by supplies from Penzance and Jersey, succeeded very quickly by those from near St. Malo and the Ayrshire coast. The London main crop of potatoes comes chiefly from Lincolnshire, the Fens, Kent, and the Lothians. Of tomatoes the home-grown supplies (under glass) mostly reach London from the Lea Valley, Swanley Junction, and Worthing. The Canaries send over a million hundredweight, the Channel Islands half that quantity, and Holland rather less. The chief centres of green vegetable production are North Kent, Middlesex, Essex, Bedford, Huntingdon, Worcester, and Wisbech. The lecturer next referred to the London wholesale markets—Covent Garden, the Borough, Spitalfields, Stratford, and Brentford—and their methods of doing business. He described how Covent Garden acts as distributing agent to provincial markets, and emphasized the need for improvement in English packing and presentation, in order to maintain equality with imported produce. Gluts were practically inevitable, owing to the variability of our English climate, but housewives should take advantage of them by jam making, bottling, etc. The lecture was followed by demonstrations of home methods of fruit preservation by the Chipping Camden Research Station (University of Bristol) and of standardized packages for fruit and vegetables by the Ministry of Agriculture.

FAILURE TO RETURN TESTIMONIALS.

"1924" writes: I wish to draw attention to a grievance common to the majority of younger graduates—namely, the discourtesy of advertisers in not replying to applicants for vacancies. I am in the habit of applying for several of these vacancies every week, and although a stamped addressed envelope is invariably enclosed, testimonials are never returned, except occasionally in the case of institutions. As the cost of each application works out at 1s. 1½d., the cumulative cost of these becomes rather heavy. Some advertisers also require photographs. The publication of this letter in your columns might have some small effect in bringing this omission to the attention of the delinquents concerned.

MEDICAL GOLFING SOCIETY.

THE annual summer meeting of the Medical Golfing Society was held at Moor Park on June 11th. Over ninety members took part in a most successful tournament, and the thanks of all competitors are due to the Moor Park Golf Club for the excellent arrangements made and for the splendid condition of both courses. The results were as follows:

Lancet Challenge Cup (scratch).—H. D. Gillies, 3 up.

Henry Morris Challenge Cup (handicap).—J. O'Malley (6), all square.

Milsom Rees Challenge Cup (scratch return in second class).—H. P. Aubrey, 5 down.

Class I.—First: L. E. Barrington-Ward (9), all square. Second: The following tied at 1 down—J. Forrest, L. Welply, G. Norman, A. H. Vassie, J. Grace. Best last nine holes: The following tied at 1 up—J. Forrest, L. Welply, G. Norman.

Class II.—First: G. F. Wilson (14), all square. Second: C. V. Mackay (11), 1 down. Best last nine holes: W. A. Rogerson (12), 1 down.

Foursomes.—The following couples tied for first place: G. P. Kennedy (8) and L. Welply; A. Evans (8) and S. Bonnalie (5).

"DOCTORS DIFFER."

DR. THOMAS SIDEBOTTOM (Bardney) writes: Your correspondent "E. S." (June 13th, p. 1114) asks if this saying was originally applied exclusively to medical men. In the third of his *Moral Essays* Pope says:

> "Who shall decide, when doctors disagree,
> And soundest casuists doubt, like you and me?"

Here the word "doctor" is evidently used in its now archaic sense of "teacher" or "learned man," and these vigorous lines are probably the origin of the rather feeble "doctors differ."

RESEARCH DEFENCE SOCIETY: CORRECTION.

THE Honorary Secretary of the Research Defence Society calls attention to an error in the report of the annual meeting of the society published in last week's issue of the JOURNAL (p. 1100). It is there stated that the income of the society from subscriptions and donations amounted to little more than £70; whereas the balance sheet shows that from these sources it was nearly £700.

A BROADS CAMP FOR BOYS.

DR. F. CHAMBERLAIN, secretary to the cadet department of the Broads Cruising Association, announces that a camp will be held for boys between the ages of 14 and 18 on the Norfolk Broads in the last fortnight of August. The object is to provide an attractive holiday and to give an opportunity of learning watermanship and small boat sailing. Further information may be obtained from Dr. Chamberlain, 127, Aylsham Road, Norwich.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 39, 40, 41, 44, and 45 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 42 and 43.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 271.